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"O FORTUNATOS NIMIUM SUA SI BONA NORINT
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## PRIZE ESSAY,

To which was awarded the Premium offered by the MARYLAND STATE AGRICULTURAL SOCIETY—Messrs. Kay, of St. Mary's, and Dick and Gunton, of Montgomery Co., Md., Judges—

## ON THE RENOVATION OF WORN-OUT LANDS:

*By COM. THOS. AP. C. JONES, of Fairfax Co., Va.*

In the catalogue of premiums offered for competition, by the Maryland State Agricultural Society, and which are to be awarded at the approaching Baltimore Cattle Show, may be found one, "*For the best Essay on the Renovation of Worn out Lands.*" If I am not mistaken, this is not the first effort set forth by the praiseworthy liberality of the Maryland Agricultural Society, to obtain what the farming interest of the old thirteen States, in particular, so much need; a Hand-Book or Manual, founded on practical knowledge and long experience, (such a work as the really practical husbandman only can supply.) Why has not this prize, of such high value, in what interests *everybody*, been contended for? It cannot be, because we have no successful Renovators of exhausted soil among us; nor is it that among our working farmers, there are none capable of communicating what they have practically acquired, to others.

'Tis true, the best farmers are not always the best scholars, nor do they care to appear in the public prints at any time, but especially when their competitors may be the most highly gifted scholars of the land. Now at the risk of being adjudged presumptuous, having devoted about thirty-four years to the precise object, "the *Renovation* of *Worn-out Land*," I put in this my humble offering, to the Society's premium, not however, so much in expectation of winning the prize, as to avail myself of the occasion to record answers to the questions so often put to me, as to the means employed in the reclamation of my own thoroughly worn-out land, and as to my opinion of the various manures now in use, and the best mode of applying them.

To my task then, and what I may say will partake rather more of the character of a simple narration or journal of my own doings, than of that of a Treatise derived from the doings of others. I will arrange my subject under several appropriate heads, showing,

*First*, what my land was in 1819, when I took it in hand. *Secondly*, what it is now in 1853. *Thirdly*, by what means it has been resuscitated and brought to its more than pristine fertility. *Fourth*, a system of Rotation for the guidance of *young* farmers of the most limited means, and *lastly*, some observations on Lime and Liming—on Manures and Manuring, concluding with a formula for compounding various manures and the formation of cheap composts.

In the first place then; January 1819, found me in possession of land in Fairfax County, Virginia, so poor, as, even in that then proverbially poor County, of which it was often said, the more Fairfax land a man had, the poorer he was, to be known and designated by the Commissioners who divided the old family estate, as *Poor Hill next the Dower*. One-half of my 140 Acres was in virgin wood consisting of the varieties common to this section of Virginia. The quality of the land originally was middling, and all the cleared portion was thoroughly exhausted by the tobacco and corn system of our progenitors, who, in their laudable desire to enrich posterity, left their children fields poor indeed. This isolated patch drawn from a worn-out tobacco plantation of 3000 Acres, was without improvements of any description; there had never been even a Negro Cabin on any part of it, it was not fenced in, nor was there a wheel-barrow load of manure about the premises, nor was there at that day, within my reach, any of the powerfull, concentrated manures now so freely used.

No agriculturist, young or old, ever embarked on a more forlorn hope, than did I, when I undertook to renovate *worn-out soil in Fairfax*. 'Tis true, I had a small income of about $700 per annum, from another source, but what was that compared to my wants? I had houses of every description to build, labor to hire, feed and clothe; farm to stock out and out, and my own personal and somewhat extravagant wants, real and imaginary, to provide for. In short, I had everything to buy and nothing to sell; and what was worst of all, I was discouraged by old Farmers, on every side, some of whom affirmed that Fairfax land could not be improved. "Plaster would not act at all," and "*as to Clover, it was a greater impoverisher even than Corn and Oats,*" the alternating crops of those times. Nothing daunted at all this, for my case was somewhat desperate, a wanderer on the face of the earth without a place that I could call *Home*, and as already said with a small income of six or seven hundred dollars per annum, I had to choose between spending that in boarding-houses and taverns, or in an endeavor to improve the bit of land I had inherited. I resolved on the latter, and at it I went. The first decisive step taken was to sell 40 Acres of my wood land to enable me to erect a house to live in. That left about 70 Acres of thoroughly exhausted, worn-out, *naked and gullied* cleared land, to commence on. The agricultural condition of the neighborhood, in which I settled, will be better understood, when I state, that in 1820 the whole 3000 Acres of which my 140 Acres were a part, did not yield three tons of clean Hay per annum.

If at the commencement of my agricultural experiments, I was discouraged by the example and predictions of those among whom my lot was cast, I assure the reader, the results of the first few years, were by no means cheering; but *having put my hand to the plough*, my faith was too strong to allow me to look back in despair, although I did not always reap where I sowed, and frequently gathered not, where I had scattered with a liberal hand. Such was my beginning in 1819. The third year thereafter, I cut a little clover for hay, and had one acre of reclaimed swamp land well set in Timothy.

This year I erected a permanent shelter for cattle with a *loft capable of holding 35 or 40 tons of Hay*. While this building was being erected, I was the laughing-stock of the neighbourhood, as well as of passers-by on the Turnpike. The best farmer of the vicinity, at that day, after a careful survey of my premises, *cow house*, and *hay mow*, declared, that the whole County of Fairfax would never make hay enough to fill them! Was not this encouraging to a young farmer? But what is the result? For twenty years past, that mow has not been able to contain one-half of an average crop. Fields which did not even yield Poverty grass when I took them in hand, now produce *Kentucky blue, i. e. English Lawn Grass*, spontaneously, and those which did not return three bushels for one, when seeded with Rye, Oats, Buckwheat, &c. &c. now yield from 15 to 27, and as high as 32 bushels of *wheat* per acre, from 30 to as high as 72 bushels of Oats per acre, from 8 to 14 and as high as 17 barrels of Corn per acre, and an average of 1½ tons of cured Hay, and as high as 3½ tons per Acre, at a single cutting, and all other crops usually cultivated on Market-Farms, in like proportions, besides having over six-hundred fruit trees in full bearing of the most choice seed and stone varieties.

Having thus shown what my land was when I took it in hand in 1819, and what it *now is* in 1853, and lest any may be incredulous, I will here insert two extracts from Ruffin's Farmers' Register for the years 1838 and 1839, in proof of the practicability of reclaiming the worn-out lands of Virginia and Maryland, and of raising them to the highest state of productiveness.

"Memorandum of the culture and products of an acre of land in the County of Fairfax, by Thos. Ap C. Jones, for seven consecutive years, taken from the 1st and 2d pages of Vol. 6, *Ruffin's Farmer's Register.*"

| | | |
|---|---|---|
| In 1831—Produced 600 bushels of Turnips at 25 cents per bushel, | | $150 00 |
| In 1832—Oats 72½ bushels, sold at 45 cts. per busnel, | | 32 72 |
| In 1832—Stubble turned in and sowed with wheat and Clover seed in September. | | |
| In 1833—Wheat (lodged and did not fill well) only 19 bushels sold at $1,25 per bushel, | | 23 75 |
| In 1833—In October, mowed the stubble and got one and a half tons of cow-food worth $12,00, | | 18 00 |
| In 1834—Clover, June cutting, 3 tons, | | 36 00 |
| September, 1½ Tons, at $12,00 | | 12 00 |
| Fallowed after second mowing, and sowed with wheat, harrowing in fifty bushels of quick lime at the same time. | | |
| In 1835—Another bad wheat year (blossoms washed off by hard rains) only 22 bushels at $1.25 | | 27 50 |
| Mowed the stubble in September, one and a half tons of mixed hay worth | | 12 00 |
| In 1836—Clover and herds grass, 3½ tons $15 per ton, | | 52 50 |
| 2d crop plowed under preparatory for corn. | | |
| In 1837—Planted latter part of April, with *Baden's Twin Corn*, 4 feet, 6 inches each way; put a good handful of ashes, lime and plaster of Paris combined in each hill; product over ten barrels, say at $3,50 per barrel, | | 35 00 |
| | | $394 27 |

The above land received from two to three bushels of gypsum annually put on at various periods, but *never failing to follow the scythe with a good dressing of plaster.*

Ground Plaster costs from $7 to $9 per ton in Georgetown. Fresh lime, at kilns in Georgetown, in 1834, cost 15 cents per bushel, and now 12½ by the quantity.

From these data, let the skeptic make any deductions he may think proper, for expense of cultivation, at the highest wages for man and beast, and add interest on all cost and charges, and still there must remain a clear profit but little short of $50 per annum, from rather less than one acre of ground, which previous to manuring in 1831, was utterly worthless, but is now considered rich. It has on it 30 flourishing young apple trees just getting into bearing, and promises a good crop of wheat seeded the last of October.

"Product of ten acres of land on the Sharon farm in Fairfax County, Va., (owned by Thomas Ap. C. Jones) improved by liming and manuring—for the year 1838.

Taken from Ruffin's Farmers' Register, Volume 7, pages 153, 154 and 155:

| | |
|---|---|
| Five acres of wheat produced 117 bushels at $1,60 | $187,20 |
| Straw of the same | 28,25 |
| 3 acres produced *eleven tons*, 16 cwt. of cured clover hay, worth on the farm 50 c. per cwt. | 130,00 |
| Clover seed from the same ground, 2½ bushels, worth now $15 per bushel, | 37,50 |
| Pea and the straw from one-fourth of an acre, | 12,00 |
| Three-fourths of an acre in sugar beets, Ruta-baga, carrots and turnips, and not more than one-fifth of an average crop in consequence of drought, but according to present prices worth | 75,00 |
| Fruit and cider sold from peach and apple trees growing on the above land | 251,00 |
| One acre of turnips, gross amount as per statement No. 1, (below) | 255,20 |
| Apples and other fruits and cider consumed at home, and what remains on hand at this time, | 86,00 |
| Five pigs in a pen and fed on grass and offal fruit from the above ground and kitchen slop, killed at ten months old, weighed 734 lbs. at 8 cents is $58,72 cts. deduct two barrels of corn for last feeding, $8,00, | 50,72 |
| | $1,113,37" |

One thousand one hundred and thirteen dollars, and thirty-seven cents, from which I leave the reader to make his own deductions for the year's expense of cultivation and marketing.

This much I affirm, that no acre of the above land, except the one in turnips last year, has ever cost $5,00 to improve it, and that every acre has paid me from $25, to $50, annually, since the lime and manure were applied.

These results show what I had done up to 1839,* and what others may likewise do, and in most cases, and in all cases of old settled farmers, in less time, and at less expense than I have incurred.

To give a full and circumstantial detail of all the means and appliances employed to produce the results stated, would occupy far more time and space than can be appropriated to an essay designed for the *working* farmer. If I may now claim to be a practical farmer, and a successful renovator of worn-out lands, how I have accomplished this important end, I will endeavor to reveal in the rules I shall recommend for the use of all *young farmers*, who, from whatever motive or cause, may feel disposed to devote their time and energies to the cultivation of the soil.

I will suppose the young farmer already in possession of the land, and that he is supplied with at least three work horses or mules, one yoke of oxen, a good two-horse plow of the bar-shear kind, and a *one-horse bar-shear plough*, one *sub-soil plough*, one *cart* and one *seed* harrow, one two-horse roller, and a cart equal at least to two and a half men, besides a woman to cook, milk and wash. I will suppose too, that he has a comely and *notable* wife, both willing and competent to share with her *lord* and *protector*, in all the cares as well as pleasures of life. Also that he has a proper complement of all farming implements, tools, &c., necessary to carry on a farm, among which there must be a two-horse wagon, a horse-cart and an *ox-cart*. This outfit is computed for a farm of from 120 to 150 acres, according to circumstances. If the young farmer has more land than means to stock it well and cultivate it thoroughly, then my advice is by all means to sell off as much of his surplus land as will put him in possession of funds sufficient to thoroughly cultivate and speedily improve the residue. I have somewhere met with an old proverb, which I earnestly commend to all farmers whether young or old, viz: that, *two acres of land on top of each other are better than three side by side.* For example, in 1832, I got from one acre of well manured land, 72¾ bushels of oats, having sowed three bushels. The same year I rented an adjoining field of 23 acres which had been in corn the previous year. On that field I sowed 30 bushels of oats, and after giving the landlord his *third*, and taking out the seed, I had 120 bushels left for my profit, *rather less*, for upon each of the 23 acres there was the same labor bestowed as upon the *one*—the manuring and eight dollars worth of lime, about the value of two acres of land, at that time, made the difference.

As my purpose is to lay down rules for the *young farmer of minimum means*, which the affluent and more experienced agriculturist may easily extend or modify to meet his own enlarged ability and circumstances, I shall take for illustration, an even hundred acres, thirty of which we will suppose to be in wood, leaving 70 acres for the plough. Of this 70 acres I will appropriate 10 acres to buildings, gardens and orchards, hence I have 60 left for farming purposes proper. I will divide these into six fields of 10 acres each, and number them 1, 2, 3, 4, 5 and 6;—I will suppose too, that the young farmer is in possession and prepared to break ground at the opening of spring; of course he has employed all the working weather of the winter months of the year, i. e., January, February and March, in getting rails and repairing fences, &c., &c., until the ground was sufficiently dry for ploughing for corn, or if any portion of his land was in summer crops the preceding year, for oats. When the corn ground is to be broken for the first time, which I will suppose to be in nothing better than *poverty grass*, I would hitch the best one of my three horses to the one horse bar-shear plough, and *turn the furrow 3 or 4 inches only*, following at the same time and in the same track, with the sub-stratum, alias sub-soil plough, drawn by the other two horses, as deep as they can pull it, which if it be Davis' (formerly of Georgetown, D. C.,) primitive sub-stratum plough with my improved point, will be from eight to ten inches. This operation at once provides a tilth of 12 inches on an average, still retaining near the surface, where, if there is any left in the soil, it should be, the little vegetable mould as food for plants, while at the same time, *a receptacle is furnished, sufficient, in most cases, to absorb and hold all the rain that falls in any one place, and thus more effectually than by any other means within reach of the farmer of limited means, arrest washing*, to which cause is to be attributed, the exhausted state of the once fertile, but now worn out lands of Maryland and Virginia. The cause of exhaustion once removed, the work of renova-

*Up to this time I had depended almost entirely upon the resources of the farm for manuring. With the exception of lime and plaster, my use of foreign or purchased manures had been confined to experiments upon the smallest scale.

tion becomes progressive; slow it may be, if unaided by art and science, but time alone, in *the end, would bring back the land to its primeval state*, if surface-washing were effectually arrested.

Nor is the safeguard against washing the only benefit derived from sub-soiling exhausted lands, especially if the sub-stratum be a compact, tenacious clay, like my own, for as clay soils are more retentive of moisture and parts with it much slower than gravelly or sandy loams, it follows of course, that the larger the quantity of rain absorbed by the earth loosened to a greater depth, the more there is kept in store, and slowly given out, to nourish the growing crops. On land thus treated, I have never known the corn crop to fall below an average one, and when the land has been limed, and when manures have been judiciously applied, I have cut as heavy grass from *hill tops* as from *bottom lands*.

Supposing the ground to have been broken as directed, and left in the rough state, till the time of planting approaches, which is better indicated by *Nature* than by the Almanac, or than any man's notion of a particular day, for if you plant too soon, that is before the ground is warm enough to sprout the seed quickly, you will assuredly have much re-planting to do, which is sometimes attended with more labor and expense than the first planting. If you plant too late, the culture of your corn will interfere with your clover and your grain harvests, and your corn may be injured by early frosts, so that, as in most other acts of man, a middle course is best for planting. In this and like matters, we may profitably follow nature's laws. I have found the budding and blossoming of forest trees, a good criterion for planting corn and sometimes some seeds; for instance, where the leaf of the tulip, or wild poplar tree is the size of half a dollar, Indian corn may be safely planted, and when the chestnut blossoms are fading, buckwheat may be sown with a fair prospect of a crop.

As short a time as practicable before planting corn, the corn ground may be rolled and thoroughly harrowed, and then marked with a double mould-board plough, or what is better, the old Dutch plough, long used in Virginia and some parts of Maryland, for that purpose, at such distances as may be determined on, according to soil, situation and climate. I plant as close as I can to allow room for after culture. The poorer the land the closer I plant, regulating the number of stalks to the acre, by the number left in the hill, rather than by the distance between the hills if checkered, and the rows of stepped and drilled corn. Twelve hours, at least, before you intend to commence planting your corn, dissolve half pound of copperas in some boiling water, into which pour about a gill of tar, add as much more water as will make thirty gallons; then put your seed corn in, stir it well, and allow it to soak 12 hours at least. When ready for planting, take the corn out, and let it drain awhile, then roll it in Plaster of Paris, and put four or five grains in a hill. It will not be long coming up, nor much troubled by crows and the like, and will seldom require replanting.

The next process, if your land was not sub-soiled when broken up, is to run a naked, sharp coulter as near the corn, on each side, as a horse can walk and as deep as he can draw it. This done, as soon as your first planting is large enough to thin, run your two horse heavy harrow over it, following at the same time with hand *hoes* to thin and draw a little earth about the remaining plants (without any other cultivation than this, except a handful of plaster, wood ashes and lime, applied on the hill after covering, I have made 11 barrels of corn to the acre, from a field of several acres). As a general rule with me, the culture of Indian corn after it is planted, consists in surface culture, taking care never to disturb the sod, if any was turned under, and above all, never stir even the surface of corn ground when wet. A good general rule alike indispensable to preserve the fertility of the land and to insure good crops, is *not to work corn unless the dust will follow the plough*, nor after the roots have extended so far as to be disturbed by the implement. Strict adherence to these rules for the cultivation of all summer crops, will not only insure fair crops in *any season*, but will redress that most valuable of all grain, Indian Corn, from the unjust charges so pertinaciously insisted on by all *bad* farmers, of robbing mother earth of her native fertility, and rendering her powerless to produce.

The young farmer will probably find it necessary to secure all the corn-fodder he can the first two or three years. If so, that is best done by cutting the tops and pulling the blades as soon as the outside shucks of the ear turns brown, but corn intended for bread should not be gathered nor cut off before November, after some black frosts, nor even then, unless the cobs are dry. Thus ends the culture for the first year's corn crop, which be it remembered was on field No. 1. As early in the spring of the second year as practicable, the corn field of the previous year is to be thoroughly ploughed, harrowed and sowed down in oats, when immediately thereafter, field No. 2 is to be taken in hand and treated in all respects as was field No. 1. As soon as the oat crop is removed from No. 1, turn down the stubble this time with the two horse plough, followed in the same furrow by a coulter drawn by one horse, if you have no more, roll and harrow pretty freely as directed in preparing the corn ground, and in the last days of September or first ten days of October, sow down with wheat. If to be sown broad-cast, soak the seed in strong *brine*, from 12 to 24 hours, and roll in lime. If to be drilled, which is preferable, the seed must be *dry*. Clover seed may be sown on the wheat after harrowing, but before any rain falls, or any time in spring after the snow is gone, and until April.

We are now in the third year with field No. 1, as soon as the wheat is removed, turn your swine in as gleaners, but no other stock until there has been a biting frost, when moderate grazing with cattle will be rather beneficial than otherwise. As the most trying ordeal through which young clover has to pass, on thin lands particularly, is the sudden transition from shade to a parching July sun by the cutting of grain on which it is sown, it is of the first importance towards guarding against the destruction in a few hours, of a good set of young clover, it should receive a generous dressing of Plaster of Paris, the same evening or following morning. One bushel per acre, without any mixture, but finely ground, is the least quantity that ought to be applied at that critical season.

Early in the spring of the fourth year, that is, as soon as the frost is out of the ground, and the clover and meadow grass leaves begin to appear, dress with a compost of one bushel of Plaster of Paris, two bushels of wood ashes, one peck

lime and one of common salt per acre, double the quantity of ashes would be better, (if ashes are scarce any rich earth or fine manure that can be conveniently sown by hand will answer in equal proportions with ashes,) but bear it in mind that after the ground is once covered with snow, no hoof or tooth ought to be admitted on young clover, especially should sheep and horses be kept off, for the buds that are nipped by them in winter and early spring, can never recover from it, and many will be *utterly destroyed*.

Clover fields treated as I have directed will be in full bloom by the middle of June. When one-third of the blossoms have turned brown, is the proper time to put in the *scythe*, and this must not be neglected on any account, for although there may not be a remunerating crop for *hay*, to take off the land, it should be mowed, and *mowed all over too*, as there is no better extirpator of noxious weeds, brambles and the like, than the scythe in May, June, July and August. Moreover, if the clover is thin and light, mowing before the root is exhausted by the ripening of the first crop, will cause the roots to throw out many additional seed stalks, for the second growth, which although it may not be so tall as the first, will certainly be much thicker and cover the ground better. [Here remember, whenever you mow over dry land, follow the scythe with *a dressing of plaster, if nothing else.*] The second growth of clover is the seed crop, but if the young farmer cannot save the seed without cutting the clover, he had better let it fall and lie on the ground until vegetation is checked by autumnal frosts. Then, but not till then, it may be pastured without detriment except when the ground is very wet and soft, and as in the previous year, not after mid-winter. This brings us to the fifth year with a fair prospect of a tolerable crop of clover, if my directions for the last year were strictly adhered to. The young farmer may now exercise some discretion; he may mow for hay in June, or he may pasture off, taking care not to turn in stock any sooner than he would have *finished mowing*. Henceforth, until April of the sixth year, he has a pasture for cattle, horses and sheep, and the more of them he puts on it, and the closer he grazes this year, the better for the land. It is the practice of many good farmers to break up their land for corn, the preceding autumn. My experience teaches me differently. I have always found that *blue* grass turned over in autumn was not killed by winter frost, and gave a *deal* of cross ploughing and other work in spring, to get the ground in good order for planting, and a great deal more work in after culture, than when the sod is turned as short a time as possible before planting; besides this, you lose your best pasture, for sheep in particular, from early frost in autumn till March, say four months in every year, on an average. But whether you break up in the spring or autumn, No. 1 must go in corn the sixth year, and is to be treated thenceforth pretty much as was the first rotation. Fields No. 2, 3, 4, 5 and 6, follow No. 1, in annual succession, and as near as may be, under similar treatment.

The reader will probably be surprised that I have said so little, as yet, about manures. The omission was *intentional*, first, because I did not suppose the young farmer had much of that on hand, and secondly, because I am endeavouring to lay down a plan for the renovation of worn-out lands in the hands of farmers and farmers' sons, who for want of means or by reason of remoteness from regular supplies must depend on the resources afforded by their own premises, and lastly, because I have thought that a separate section devoted to manures would be better than to break the thread of my narrative by recommending this or that manure, or this or that time or mode of applying it. Besides I am quite sure that any young farmer in the first five or six years of his operations, however successful, has hardly been able to rake and scrape together more manure than was necessary for the production of potatoes and other culinary vegetables, on the ten acres set aside in the beginning for buildings, gardens and the orchards, which, I presume, were planted out in the second or third year, at farthest, and will, of course, require annual manuring as well as annual cultivation in summer crops, such as potatoes, turnips, sugar beets, Ruta baga and the like, for seven years, at least, for apples, and all the while for peach trees.

The thirty acres of wood land, set apart for fuel and fencing, ought to be well enclosed for a permanent hog pasture, and for cattle in early spring, and at all seasons, when the ground is too soft to turn cattle on cultivated fields. I have not introduced in my rotation, summer fallow, as generally understood, for wheat—

First, because it is not likely that the young farmer had a clean field for that object, nor suitable manure to enrich one. All the worn out lands of Maryland and Virginia, with which I am acquainted, are more or less infested with blue grass and garlic, to a degree forbidding the production of good merchantable wheat from summer-fallowed ground. Wheat upon oat or barley stubble which was in corn the preceding year, is not only the best remedy against garlic, but is the very best process to insure a full crop of clean wheat on any land.

It must be apparent to every practical farmer, that no stiff land, land best adapted to the production of wheat, can be put in proper condition to receive the seed, when deeply plowed in mid-summer, by once harrowing, even when the roller precedes or follows the harrow; especially if the land has been pastured. Such land, at that season, can never be easily plowed unless so moist as to bake very hard under an August sun, and often to a degree that no harrow can properly pulverize, by once or twice passing over it I know it has been often said, and will be again said, that a rough fallow is the sulay for a wheat crop; the *clods* are said to serve as protection to the weak plants during winter, and by gradually mouldering away as spring advances, constantly supply fresh covering to roots exposed by the high winds of March, blowing away the fine earth which covered them. That such is the operation and effect to some extent, cannot be denied, but it is far better to *prevent the evil* than to cure it by such means.

Let your Oat or Barley stubble be well prepared, the finer the better, and put your Wheat in, in good season, with Pennock's or any of the many seed-drills now largely in use, and my word for it you will have nothing to fear from winter-killing, nor from the roots in Spring-time. How often do we hear the farmer complain that his wheat is too thin, the winter has killed it, the fly destroyed it, won't make half a crop, &c. &c. While these lamentations are going on, one might traverse the fields after harvest, by stepping from clod to clod which at time of seeding were a foot or more in diameter

and through which no germ of the seed did, or could possibly pass, while the seed from the hand of the sower, falling on such rough ground, rolls off and interlaps with the seed from neighboring clods, and collects so thickly as to stifle and smother all. So that from one cause or another, a portion of the ground is entirely too thickly and another too thinly seeded, while in the aggregate by reason of missing spaces, nearly one tenth of the superficies bears no fruitful plants. Is it then at all surprising that some of the finest wheat lands of the Shenandoah valley and of the opposite Counties of Maryland, yield an average of only about twenty bushels per acre, whilst occasionally, with better farming, but no better land, forty, fifty or more bushels are produced. If land which yields twenty or twenty-five bushels under the common mal-practice of rough summer fallow, were treated differently, and more after the manner I have suggested, fifty or sixty bushels per acre would be more common than twenty or thirty now are.

## ON MANURES.

What I have to record under this head, I will premise by endeavoring to correct two very prevalent errors in regard to *Lime as a manure*.

First then, Lime, practically speaking, is not of itself a manure, yet at the same time no soil, other than alluvial, annually flooded, can be certainly fruitful and *permanently productive*, that does not contain a due portion of lime in some form or other, to be absorbed by the rootlets of plants for the perfection of both straw and grain. I have known some curious blunders and detriment to the progress of liming, by the use of *lime as a manure in comparison* with strong putrescent manures; for instance; a shovelful of each, was, by a novice, put on the hills of alternate rows of corn. The result of such ill-judged experiments need not be told.

Another common error, and one little less fatal to the general use of lime as an auxiliary renovator, is that it must be applied in quantities so large as to interdict its use by most farmers who derive support entirely from an exhausted soil. I was a great sufferer under this popular error. When I commenced farming, there were but few, if any *native* periodicals devoted exclusively to Agriculture, and adapted to the wants of our own country, consequently, we had to look abroad for agricultural light, which when received, was illy adapted to our resources, our climate, or our worn-out lands.

The English works with which we were most familiar, told us of liming by the 1, 2, 3, 5 and even 360 bushels per acre; and in Pennsylvania, where liming was first brought into much use in the United States, 40, 60, and 120 bushels per acre were generally administered.

I commenced with about 40 bushels per acre, and I have, occasionally, applied 60, and as much as 80 bushels, on one occasion. The result was highly satisfactory in each case, but the expense was entirely beyond the means of most farmers. Long experience and close observation have satisfied me that lime in far smaller quantities than is generally supposed, may be applied in various ways and with great advantage. I had good results and lasting benefits from the application of as little as 15, and even down to *five* bushels of fresh burned lime per acre, mixed with three or four times its bulk of *road* scrapings and even of virgin soil dug out of banks on road sides, spread on grass lands in Autumn. Lime thus neutralized by clay or earth forms a most valuable ingredient for making compost; indeed a single bushel of lime well mixed with ashes, dry earth and the like, to prepare it for sowing by hand, applied to one acre of wheat and harrowed in with it, on land destitute of lime, will have a very salutary effect in hardening the straw and producing well filled heads.

The mode of applying manures being a subject of such diversity of opinion among the best farmers, I feel some distrust in recording my own experience. Some plow it in as deep as they can, some shovel or harrow in, and some top-dress by spreading it on the surface and particularly on grass lands, and there let it lie—some do these things in the spring-time, some in winter and some at seed-time, and a *few, directly after harvest or mowing*.

The result of my own experience, after a fair trial of *all* the modes practised or recommended, is that manures should be kept near the surface within the reach of air, light, heat and moisture. There are some exceptions to this general rule, for instance, when rough manure is used in the drill (the best mode for raising Irish Potatoes in the tide-water counties of Maryland and Virginia,) it must be buried deep; so too, when applied to the corn crop, it must be spread thick on the surface and deeply turned under.

This last practice I seldom pursue, now a days, and for two reasons, first, the difficulty and cost of hauling such a bulky article any considerable distance in spring time before the ground has become settled after the alternate freezing and thawing of winter, and the great damage done to roads and fields traversed at such season.

Moreover, I do contend, the opinions of many to the contrary notwithstanding, that the rough manure of the farm yard, of a winter's accumulation, removed in March for the corn field, if suffered to remain in the yard, occasionally strewing plaster of Paris and sulphate of Iron, (copperas) over it until more thoroughly decomposed by the genial heat of Spring and early Summer, although it might lose 50 per cent. in bulk, one load of the thus concentrated manure would be equal, as a fertilizer, to four of the rough mass in which it was found in March.

This is a subject of peculiar interest to the owners of large farms, say of 500 or more acres. Let any one count the cost of manuring ten acres of land for corn, with manure to be hauled 1200 yards from the farm yard, in the months of March and April, and he will find that he had better sell the extra teams he keeps for such hauling, and lay out their value in lime and some of the highly concentrated manures, than to continue the old practice.

I shall be asked how I expend or apply my home-made manures. I will tell you in as few words as I can. In the first place, I have, as the reader may remember, a standing farm-yard or cow-pen in which my cattle are penned every night, winter and summer. The pen is surrounded by stalls for the milch cows and work oxen, while the young and dry cattle have shelters under which they retire at will. The centre of the yard is concave, so as to retain all liquids that fall into it, while there is dry ground round and about, for the cattle to stand or lie down. This yard is abundantly littered with straw, corn-stalks, &c. from early autumn until late in the spring. Back of my horse-stables, there are close receptacles, where the horse-litter

deposited, morning and evening. This last manure is applied exclusively to top dressing mowing grounds in early spring and autumn, but the best time of all is as soon after mowing as possible, although it be under the burning sun of July or even August. This idea will, doubtless, startle many practical farmers, and professors of the art and science of farming, as much as it did me when first recommended by an eminently successful English farmer still living in this State. At first, I thought my friend was quizzing me, but he became so earnest and entreated me so hard to try it, if with one load only, that I consented, and applied it on a piece of fresh mowed timothy meadow, neither high nor low ground, and at the rate of only 5 cart loads per acre. The result was a heavy second growth, equal to half the first crop, and when in August, the part so dressed might have been mowed, the *stubble of the undressed portion was not hid by the after growth*. The crop of the succeeding year was 20 per cent better than on land of the same quality top-dressed in the usual way and time.

Travelling in the State of New Hampshire a year or so afterwards, on a farm where was growing the best Timothy I have ever seen in New England, I saw wagons in August, hauling cured grass from the meadow to the barn, and returning with manure from the barn to the meadow! My farmyard or rough manure is applied chiefly to the Potato crop, planting at convenient seasons through the months of March, April and May. The fine manure or scrapings, is worked into composts * and applied to Corn in the hills, to garden and field crops, such as Ruta Baga, Beets, Carrots, &c. &c. and to Oat and Barley ground, sowed broad-cast and harrowed in, to Buckwheat and Turnips in July, and to Rye and Wheat at the time of sowing.

Having said thus much about manures of the farm yard, the practical farmer must choose his own time and method of using them according to the circumstances in which he is placed.

Of all the concentrated natural and chemical manures, now in general use by farmers and gardeners, Peruvian Guano is decidly the favorite. It may not always be so. It ought not now to be the case. That upon extremely poor lands, incapable of vegetable production without the use of powerful stimulants, 200 lbs of Guano per acre will produce an astounding crop of wheat, &c., cannot be denied: and if clover seed be sown with the fall crop, or on it, in early spring, a fair crop of clover may follow next year, if the season be favorable, and if that clover be well plastered and ploughed down in June, and again ploughed and seeded with rye or wheat in August or September, there will be an improved base to work on, by a regular rotation such as I have already laid down, which must be pursued, or the benefits of the guano will be lost, and the land will be in a worse condition than ever.—But guano should not be applied the second time to the same land, unless in combination with other fine manures; nor should it ever be applied in its crude state to land that is in good heart, i. e., land that will bring thirty bushels of Indian corn, or 15 bushels of wheat per acre, without it, not but that guano on some such land might increase the product of both wheat and corn enough to pay for itself, but if it should, the soil will be robbed of its fertility, and will be left in a far worse condition than when the guano was first applied; at least, such have been my own results in its use, and such is the univereal character of guano in Peru, as I there learned upon personal inquiry, from the mouths of all persons (with whom I conversed) engaged in gardening and agricultural pursuits around the city of Lima, the capitol of Peru, from whence we obtain the best guano. I have frequently been in Peru, first in 1825, again in 1842–3, and more recently in 1848, and on each and every occasion, I took the greatest pains to obtain all possible information as to the value of guano as a manure, and the mode of applying it to field and garden culture, as well as to its *effects upon the land*, and with one accord and without a solitary exception, I was told that land stimulated by the use of guano, soon became utterly worthless, unless the stimulus was kept up by repeated applications. This was the reason assigned for so little use made of guano, where the cost of the article is merely nominal, not exceeding more than half what we willingly pay for leached ashes in the District of Columbia. Of all the concentrated manures for sale in our seaboard cities, crushed bone or bone dust is undoubtedly the best; its effect on the soil is both prompt and permanent; at least, a single application made by me 15 years ago is still quite visible, although the ground has been heavily cropped ever since.—I found that 1 bushel of crushed bone was equivalent to one double horse-cart load of good farm-yar manure. Forty such loads is the least that will enrich an acre of worn out land sufficiently for a good crop of corn, hence at the present price of bone dust, that manure is beyond the means of most farmers for the renovation of poor lands.

Poudrette, of the Lodi, New Jersey works, is an excellent manure for forcing vegetables to early maturity, hence its great value to market gardeners in the vicinity of cities, but like guano, it imparts little or no abiding fertility to the soil.

*Chappell's Fertilizer* has opponents as well as friends. Its effect does not appear to have been uniform in the hands of different persons, nor even when applied by the same person at different times. Such discrepancy is not very marvellous, since we know of no human agency that can by any possibility, produce precisely the same results in the product of the soil, every year, for a series of years. If this be true, and no practical farmer can gainsay it, ought the fertilizer, any more than guano or other manures, all variable in their effects, be condemned and thrown out of use?

The cost of the Fertilizer, $1.00 per 100 lbs., is too high for farmers in general, 600 lbs. per acre being necessary to bring very poor land up to a productive state. I am now in my third year's free use of this chemical preparation, with highly satisfactory results in every instance, the cost being the only objection so far with me. But even this is much reduced when the prolonged beneficial effect of this renovator is duly considered and compared with that of guano. The first two years I used the fertilizer (Chappell's) I put two barrels or 600 lbs. to the acre, without admixture, but on account of expense, about a year ago, I commenced a more economical use of it by admixture with cheaper substances, obtained without money, such as rich earth, or fine manures sufficiently pulverized to be conveniently sowed by hand. For proportions see appendix.

Of the phosphates of lime, to be purchased in most of the large cities on the seaboard, I have only used Chappell's *Bi*-Phosphate of Lime, 100 lbs. of which, in combination with other more

*See Appendix, for Recipe.

bulky substances, to be sowed broadcast by hand and harrowed in with small grain, or sowed in the drill, and dropped in the hill for corn and all sorts of roots, makes one of the best manures I have ever tried. See Appendix.

Plaster of Paris, slaked lime, wood ashes and common salt, combined in due proportions, may after all, at the same, or less cost, be more profitable to the farmer, than any manure yet known.

Considering lime as the only sure foundation to any good system of farming which may be adopted for the renovation of lands exhausted by injudicious culture, I will devote a few lines to that particular subject, by stating what I would do, if I had my work to go over again, and which, of course, I recommend to all other beginners in their efforts to improve worn-out lands.

First, then, when your land has been well broken up for corn in the *Spring of the year, spread* on it from 30 to 60 bushels of dry slaked lime. If you are near enough to kilns to get the *fine* lime fresh drawn, and can get it on the land before it slakes, thirty bushels of that sort will be still better than the larger quantity slaked, but be very careful not to let your lime get wet before it is spread and *harrowed* in—If you are so remote from lime-kilns as to be able to haul only one load a day, it will be better to buy the fresh burned and best lump lime, because in that state it is much lighter, and when water slacked, will increase from three to four-fold. Such lime ought to be put under cover and slaked immediately with strong brine. Lime of the quality described, and treated accordingly, acts very *promptly*, mechanically as well as chemically; mechanically, in reducing stiff, rigid clay to a loose friable texture, and chemically, by neutralizing acids unfriendly to vegetable production, and by combining with loose and light soils, they are rendered more adhesive and retentive of moisture; in other words, lime judiciously applied to stiff land renders it light, while it gives to lands *too* light, a firmer or more compact texture. This dogma, paradoxical as it may appear to many, is fully established by every brick chimney or stone dwelling in the land. All who build such houses know that lime and sand (the latter largely predominating in all light soils,) with water, are materials used by masons for the formation of mortar, which in a short time becomes as hard, if not harder than the bricks. It is also well known that if stiff clay or rich mould were to be used with lime for mortar instead of sand, that when dry, it would moulder away and become impalpable dust. Now with these plain truths before us, it is only necessary to apply smaller portions of lime to our lands according to their texture, and we can have stiff or light land as we may choose or will it.

Most writers on lime applied to agriculture, and many practical *liming* farmers too, recommend doses of 50 or 100 per cent on the previous dressing, until you get up to 120 bushels per acre at the end of the 8th year. I have not done so, nor do I consider it absolutely necessary or always expedient at such short intervals. Better extend the time according to my cycle of six shifts, applying the lime to your corn land in any convenient quantity, not less however, than you commenced with; say 30, 40, up to 60 bushels per acre. Finally and emphatically, be it remembered, *that if your land is naturally deficient in lime, that deficiency must in some way or other, be supplied*, or you never can reap the full benefit of manuring your crops, particularly wheat will be uncertain in quality as well as in quantity, without lime, however rich your land may be, and in time of drought your crops of all descriptions may fail entirely, whereas, on judiciously limed land, similar crops under like circumstances, will escape almost unscathed.

THOS. AP. C. JONES.

FAIRFAX COUNTY, VA., OCT. 1853.

## APPENDIX.

Combination of concentrated Manures to be applied by hand:

No. 1.

| | | |
|---|---|---|
| Soap boilers ashes, | 2 bushels | To be sown per acre on all meadows or other grass lands in late Autumn or early Spring. |
| Plaster of Paris, | 1 " | |
| Common Salt, | 1 " | |

The proportion of ashes may be increased to any available quantity, as high as 10 or 12 bushels, which is as much as can be conveniently sowed by hand. When 10 bushels of ashes are used, this is a fine dressing to be harrowed in with any fall or spring crop; or as a top-dressing for winter grain, and by reducing the salt to ½ of a bushel, and adding one bushel of Lime, if your land had been previously limed, and allow the mass *after being thoroughly incorporated* to remain one or more weeks in the heap, you will have a fine compost for corn-hills; a small handful to be dropped with corn, potatoes, and the like.

No. 2.

| | |
|---|---|
| Super or Bi-Phosphate of Lime, | 100 lbs. |
| Plaster of Paris, | 60 " |
| Common Salt, | 15 " |

Thoroughly incorporated with two, three, four or five times their bulk of any light rich earth, or scrapings of the lanes and farm yard after the rough manure has been removed, forms another excellent dressing to be harrowed in with any kind of grain. A small hand-full dropped in corn or potato hills, and for early spring dressing of meadows, broadcast, will be found in many cases equal to 200 lbs. of Peruvian Guano.

No. 3.

Chappell's Fertilizer—600 lbs. per acre sowed broad-cast and *harrowed or shovelled* in, I have found equal for the first, and far better in succeeding crops, than 300 lbs. of Peruvian Guano.*

No. 4.

| | |
|---|---|
| Chappell's Fertilizer, 300 lbs. | Better than 600 lbs. Peruvian Guano, to be harrowed or shovelled in, but never ploughed in deep. |
| Peruvian Guano, 50 to 100 " | |

Composts to be spread from the cart.

No. 5.

| | |
|---|---|
| Wood Ashes, | 100 bushels, |
| Plaster of Paris, | 10 " |
| Fresh Slaked Lime, | 10 " |
| Common Salt, | 10 " |

*For two years I have used Chappell's Fertilizer without admixture—generally, two barrels or 600 lbs. per acre. Last autumn I sowed the poorest part of a fresh field, with one barrel or 300 lbs. per acre shovelled in with wheat. The product was equal to 23 bushels per acre, and much the best where the Fertilizer was used. The *weight* per bushel in my nothing of the increased quantity was 64 against 61.

From five to twenty-five bushels per acre. But never to be plowed in, and except on grass land, not less than ten bushels per acre ought to be used.

No. 6.

Rough compost is readily made on a large scale by strewing the valleys in your wood-land, where is generally a large deposit of leaves and other vegetable matter, with Lime at any season of the year, and at all convenient times after one good rain has fallen. Scrape into winrows, and when you are ready for forming compost, heap alternate layers of this vegetable mould with the rough gatherings about the farm yard, and with a moderate sprinkling of each layer or so with common salt, or strong brine, and a bushel of Gypsum for each acre to which the compost is to be applied. This makes a good and durable dressing to be harrowed in with small grain, or to be sown on wheat during the winter, and immediately after clover seed has been sown.

## WORK FOR THE MONTH.

### MARCH.

Owing to the diversity of climate which abounds in our far-reaching country, the season for planting and farming operations are as variant as the winds, and while in the middle and eastern and northern states many weeks will yet elapse before the earth will be in a condition to be ploughed, yet, as in the South the time has arrived for plantation and farm labors, we shall call attention to such matters, as should be attended to at present in that region of chivalrous men and genial suns. But while the remarks we may make may demand the more prompt action therein, they will be equally applicable in those states where our journal circulates where such labors are performed at later periods of the spring,—and indeed, if proper advantage be taken of the hints we may make it may turn out equally profitable, if not more so, to the latter than the former, as longer time will be allowed for preparation.

We propose now to call attention, in the first place to the

#### Corn Crop.

Let what may be said of other products, that of corn must be considered as the most important, and therefore we shall devote our attention especially to its cultivation, in the hope that what we may say may have some influence upon those who cultivate it, and especially upon those who grow it as their *money-crop*.

We lay it down as a proposition not only susceptible of proof, but one which is justified by the experience of all observing corn planters, that a profitable crop of corn cannot be grown upon a poor soil, unless that soil be liberally manured. There is no plant grown by man, that is a more ravenous feeder than it—none which better repays attention and care in providing for its wants. Give it a genial and well prepared soil, well stored with *organic* and *inorganic* food—give it cleanly culture—and nothing is wanting to assure a bountiful yield, but timely showers. With food in the soil, and rain to dissolve and prepare it to be taken up by the roots of the corn plants, aided by cleanly and judicious culture, it never yet disappointed the hopes of the planter, and never will; but it must be obvious to every reflecting mind, that a plant of such luxuriant growth, must have all the necessary elements of vitality at command, or it will be despoiled of much of its fruitfulness. Now then, as it takes just as much labor, and costs just as much, to cultivate a crop of corn grown on a poor field, as it does on a fertile one—and profit can only be assured by product—it is evident, that every one who attempts to grow a crop of corn, should be sure that his land is rich in the elements of fertility, either naturally existing therein, or artificially applied; for, of a truth, it is but a waste of time and labor to attempt to make any thing by cultivating corn on a poor soil.

To bring them more immediately to the consideration of our readers, and save them the trouble of reference, we will repeat our former *propositions* in connection with the subject of growing a large crop of corn, and add such as reflection and observation may have suggested to our mind, as being proper.

*First.* That a very large crop of corn cannot be grown on poor land, unaided by manure, and that the manure must be rich in quality, and contain *organic* as well as *inorganic* elements, and be applied in large quantity.

*Secondly*—That, even on good land, *manure* is necessary to ensure a large crop, because it gives new life and impetus to the actions and reactions of those substances which pre-exist in the soil, and which are convertible into the food of plants, by the processes of decomposition and transformation.

*Thirdly*—That 50 acres of land will produce, if liberally manured, more corn than will 100 acres that may be either not manured, or but scantily so; for it is a truth, that every corn-planter's experience has long since taught him, that there is no plant that grows, which requires more, or richer food, than that of corn, and that, if the necessary *inorganic* substances be present in the soil, you can not well give it too much *organic* food.

*Fourthly*—That, in order to secure a large yield of corn, the requisite number of stalks must be upon the ground to grow the grain.

*Fifthly*—That *inorganic manure*, as *phosphoric acid, potash, magnesia, soda, sulphuric acid, lime, &c.*, are just as essential to the growth and maturation of a large crop of corn, as are organic or animal manures.

*Sixthly*—That the success of a corn crop greatly depends upon the depth and truthfulness that the soil may be ploughed, and the fineness to which the tilth may be brought, by harrowing and rolling.

*Seventhly*—That, to ensure full and perfect success, it is necessary that *all* the elements which enter into the constitution of the corn plant should be in the soil. That it derives much of its organic food from the atmosphere, no one who has thought upon the subject can doubt; for the air, the dew, and the rain are charged with such substances, and in such forms, as to render them available; but even these must also be pre-existing in the earth, to make assurance doubly sure. Aerial food comes in most palatable shape, but not in sufficient quantity to appease the voracious appetite of so gormandizing a plant as is that of corn, whose nature it is to imitate the reputed propensity of London Aldermen, in feeding, looking to quantity, as well as quality, in its epicurean indulgencies.

Having thus premised, let us see of what the corn plant consists, so that we may the more advisedly prescribe, as to what its food should consist,

and how much of each kind an acre of corn will abstract from the soil.

Let us just turn our attention to the *Organic* composition of the kernel of the corn.

Dr. *Dana* estimates that there are in it

| | |
|---|---|
| Of *Fat* forming principles, gums, &c. | 88.43 |
| " *Flesh* forming do gluten, &c. | 1.26 |
| " Water | 9 |
| " Salts | 1.31 |
| | 100.00 |

The late professor *Norton*, in his elements of Scientific Agriculture says, on the authority of Professor Salisbury, that the kernel of the corn contains

| | |
|---|---|
| Of Starch about | 60 per cent |
| Of Oil and Gum, about | 10 " " |
| Of Nitrogenous substances | 12 to 16 per ct. |

Besides a good proportion of sugar.

In commenting upon the large proportion of oil, he says, this explains the fattening properties of Indian meal, and asserts that it is in most respects superior to any other grain.

Mr. Flint in a very able paper, printed in the Transactions of the New York State Agricultural Society, in alluding to the organic elements of corn, remarks:—

"A glance will show how greatly the fat forming principles predominate in the one hundred parts. There is hardly any grain which yields so much for the support of animal life."

Professor *Salisbury*, in his accurate and beautiful series of Analyses of the corn plant, gives the following, in his table, No. 45, as the *organic* constituents of the kernel of Indian corn when ripe:—

| | |
|---|---|
| *Sugar* and extract soluble and insoluble | 14.415 |
| *Starch*, | 60.923 |
| *Fiber* or epidermis, | 0.964 |
| *Zein* or gluten, | 3.982 |
| *Oil*, | 4.978 |
| *Matter* seperated from fiber by a weak solution of potash, | 6.482 |
| *Albumen*, | 4.642 |
| *Casein*, | 0.086 |
| *Dextrine* or gum, | 3 528 |
| | 100.000 |

No matter in whatever way we may consider the organic substances which enter into the corn plant, the mind irresistibly arrives at the conclusion, that no plant so rich in the sustaining principles of animal life, can be grown vigorously, and in perfection—can be made to put forth its entire productive capacity—unless it be liberally supplied with animal, as well as mineral manures—and that, if these be not, in abundance, in the soil, they must be artificially applied to the land, or the crop will be a greatly diminished one; for vegetable, like animal life, cannot be sustained in its integrity, unless the proper food be provided, to preserve, give tone to, and keep in a continuous state of healthful activity, those functions which govern its vitality. Stint a colt in its food from its birth until it arrives at maturity, and you will be sure to have a dimihutive horse; so also, if you deny to your corn field the proper manures,—the appropriate quantity of nourishment—and you will not fail to have a small and unremunerative crop of corn; for so sure as that two and two make four, something cannot be made out of nothing.

Having shewn the *organic* constituents of the grain of the corn, it is but proper that we should show in what its *inorganic* substances consist, in order that we may arrive at something like a well founded opinion, as to the *inorganic* manures that should be applied to the soil in which corn may be grown. And in order that the data may be reliable on which such opinion is to be formed, we shall copy from professor *Salisbury's* admirable tables, *his analysis of the ash of the kernel of the corn when ripe; his analysis of the ash of the cob of ripe corn; and his analysis of the ash of the whole plant when ripe, as leaves, sheaths, stalk, tassel, sheaths of husks, kernels and cob*; and, for the sake of convenience, we have brought the whole into one table, that the relative constituents of each may be seen at a single view.

TABLE

Showing the *inorganic* constituents of the kernel of *corn* when ripe; those of the *cob* when ripe; and those, also, of the *whole plant*, when ripe—

| | Composition of the ash of the kernel when ripe. | Composition of the ash of the cob when ripe. | Composition of the ash of the whole plant when ripe. |
|---|---|---|---|
| Carbonic acid, | trace | 8.488 | |
| Silicic acid, | 0.850 | 10.380 | 78.89 |
| Phosphoric acid with a little per oxide of iron, | 49.310 | | |
| Lime, | 0.075 | 3.833 | 5.67 |
| Magnesia, | 17.600 | 6.746 | 6.67 |
| Potash, | 23.175 | 34.400 | 23.26 |
| Soda, | 0.565 | 11.422 | 23.32 |
| Sodium, | 0.180 | | |
| Chlorine, | 0.295 | | 7.60 |
| Sulphuric acid, | 0.515 | 1.326 | 10.99 |
| Organic acids, | 5.700 | 6.430 | |
| Phosphoric acid, | | 13.165 | 14.69 |
| Chloride of Sodium, | | 1.980 | |
| Phosphate of the peroxide of iron, | | .445 | |
| Phosphates of iron, lime and magnesia. | | | 77.60 |
| | 101.185 | 99.544 | 184.119 |

Having in the preceding table shown the inorganic constituents of corn, it is but proper that we should also shew the quantity of each which is extracted from an acre of land by what may be termed a full crop of corn. And with that view we give the following

*Table*, showing the *quantities of inorganic substances abstracted from an acre of ground by a crop of corn.* The planter can see therefrom, at a glance, what substances he should provide in *addition* to his *barn yard*, or stable, or compost manures, to meet the wants of the plants.

The following are the quantities respectively abstracted from the soil by a crop of corn, of the several substances which comprise its elements. On an acre of the inorganic, there are abstracted

| | |
|---|---|
| Of Silicic acid, | 189.040 lbs. |
| Of Sulphuric acid, | 53.569 |
| Of Phosphoric acid in the grain and cob, | 25.739 |
| Of Phosphates of iron, lime and magnesia | 72 066 |
| Of Potash, | 72.463 |
| Of Soda, | 99.463 |
| Of Magnesia, | 24.506 |
| Of Chlorine, | 33.294 |
| Of Organic acids, | 12.203 |
| Of Lime, | 16.761 |
| | 599.164 lbs. |

We shall now proceed to compile a Table of the analyses made of the inorganic constituents of Corn, Wheat, Oats, Potatoes, Turnips, and of the constituents of several manures, in order to show whence supplies may be drawn to make up for the deficiencies of the soil.

A TABLE—Showing the *inorganic* constituents of Corn, Wheat, Oats, Potatoes, Turnips,—also of the constituents of Peruvian Guano, Bone-Dust, American Phosphate of Lime, and Wood-Ashes.

| | CORN. Composition of the ash of the whole plant. | WHEAT. Composition of the ash of Wheat, Grain and straw, in 1000lbs. each. | OATS. Composition of the ash of oats—grain & straw—in 1000 lbs. of each. | POTATOES. Composition of the ash of 10,000 lbs. Potatoes—roots and tops—each. | TURNIPS. Composition of the ash of 10,000 lbs. of the roots, stalk and leaves, before drying. | GUANO. Composition of Peruvian Guano. Analysis by Bartels. | AMERICAN PHOSPHATE OF LIME. Composition of | BONE-DUST. Analysis of. | WOOD-ASHES. Analysis of the Red Wood Ash. |
|---|---|---|---|---|---|---|---|---|---|
| Carbonic Acid, | | | | | | | | | 14.00 |
| Silicic Acid, | 75.980 | | | | | | | | |
| Phosphoric Acid, | 14.550 | 2.10 | 0.82 | 23.08 | 12.75 | | | | 5.62 |
| Lime, | 5.672 | 3.36 | 2.38 | 132.38 | 69.52 | 16.36 | 40.10 | 11.30 | 25.00 |
| Magnesia, | 6.617 | 1.22 | 0.89 | 20.24 | 7.63 | | 1.68 | | 5.00 |
| Potash, | 23.396 | 2.45 | 10.20 | 121.47 | 55.89 | | 0.25 | | 23.11 |
| Soda, | 22.787 | 2.69 | 1.34 | 23.43 | 32.50 | | 0.20 | | 3.32 |
| Sodium, | | | | | | | | | |
| Chlorine, | 7.096 | 0.40 | 0.15 | 6.60 | 10.46 | | | | 1.84 |
| Sulphuric Acid, | 10.970 | 0.87 | 1.14 | 9.42 | 33.03 | | trace. | | 7.64 |
| Phosphates of iron, lime & magnesia, | 17.042 | | | | | | | | |
| Alumina with a trace of iron, | | 1.16 | 0.20 | | | | | | |
| Silica, | | 32.70 | 45.88 | 49.88 | 15.96 | | 9.65 | | 5.52 |
| Oxide of iron, | | | 0.62 | 0.34 | 1.39 | | 6.47 | | 3.77 |
| " of Manganese, | | | 0.02 | | | | | | 3.85 |
| Alumina, | | | | 0.54 | 0.39 | | | | 2.33 |
| Urate of Ammonia, | | | | | | 3.24 | | | |
| Oxalate of Ammonia, | | | | | | 13.35 | | | |
| Phosphate of Ammonia, | | | | | | 6.45 | | | |
| Phosphate of Lime, | | | | | | 9.94 | | 51.04 | |
| Ammonia and Magnesia—Phosphate, | | | | | | 4.19 | | 1.16 | |
| Phosphate of Soda, | | | | | | 5.29 | | | |
| Muriate of Soda, | | | | | | 0.10 | | | |
| Sulphate of Soda, | | | | | | 1.19 | | | |
| Sulphate of Potash, | | | | | | 4.22 | | | |
| Muriate of Ammonia, | | | | | | 6.50 | | | |
| Clay and Sand, | | | | | | 5.90 | | | |
| Water and organic matter, | | | | | | 28.31 | | | |
| Bituminous matter expel'd at red heat | | | | | | | 0.69 | | |
| Substances insoluble in acid, chiefly quartz sand, | | | | | | | 16.79 | | |
| Phosphoric Acid, equal to 62.27 bone earth phosphate, | | | | | | | 30.20 | | |
| Chloride of Sodium, | | | | | | | 0.08 | | |
| Fluorine and loss in analysis, | | | | | | | 3.49 | | |
| Animal matter, (gelatine,) | | | | | | | | 33.30 | |
| Soda with common salt, | | | | | | | | 1.20 | |
| Fluoride of Calcium, (?) | | | | | | | | 2.00 | |

### Brief Notes on the above.

The reader will at once perceive the adaptation of the manures to supply the wants of the several crops contained in the table. Peruvian Guano is universally admitted to be the richest animal manure known to culturists, and to produce the best effects of any yet rendered tributary to the pursuits of agriculture, and therefore will require but a passing remark. For the corn crop, it is deficient in potash, which can be supplied by combining it with wood ashes, and, from the great amount of phosphate of lime, in the *American Phosphate of lime*, we think also if one fourth the quantity of the latter were mixed with guano, that its efficacy would be improved, viz. that, if 300 lbs. guano, 100 lbs. of American Phosphate of lime, and 10 bushels of ashes were used instead of 400 lbs. of guano alone, the effect would be more striking, and we believe too that if 1 bushel of plaster and 2 of salt were added, it would be still better.

The analysis of bones, being of fresh ones, represents more animal matter than is to be found in the article manufactured for sale under the name of bone-dust, it being made from boiled bones, and consequently deprived of much of its animal matter.

The analysis of wood ashes is of unleached ashes, and does not represent the quantity of potash to be found in the leached ashes of the soap-boilers,—about 73 per cent of potash is abstracted in the process of leaching. The proportion of lime, however, is greater than that represented in the table, owing to their adding lime—it would be nearer the truth to say that every hundred bushels of soap-boilers spent ashes, contain nearer 35 bushels of lime than 25 as stated in the table.

The *American Phosphate of lime* in the state in which it comes from the quarry, except being reduced to a very minute state of powder, by grinding, as well as the *bi-phosphate*, is for sale in Baltimore by Mr. *Evan T. Ellicott*. The *Bi-phosphate* is treated to Sulphuric acid, and is dearer than the

*native* article. For ourself, from the very minute subdivison into which the latter is reduced, we think the addition of the *acid* unnecessary, as the *acids* to be found in the soil will be sufficient to let loose the phosphoric acid from its combination with the lime.

*Preparation of the Corn-ground.*—In the first place be careful to distribute the manure broadcast as equally as possible over the field, in order that equality may be produced in the state of its fertility.

Much of the success of a corn crop depends upon the manner in which the ground may be prepared for the reception of the seed. All land that is *not wet* should be ploughed at least 8 inches deep, and would be all the better of being subsoiled from 6 to 8, or 10 inches more.* The ploughing should be executed with accuracy; no part should be left unploughed, and care should be taken, to use the harrow and roller freely, so as to break all lumps, and reduce the soil to the utmost fineness of tilth, as the more perfect in this respect the condition to which it may be brought, may be, the better chance will the plants have to push their roots in search of food; the better chance will the earth have of absorbing the dews and rain, the freer scope will the air have of penetrating the soil, and performing its peculiar office, in facilitating the decomposition of the organic remains, and preparing them as food for the plants.

When clover-leys or grass-swards are ploughed, before harrowing, the ground should be rolled with a heavy roller the same way it was ploughed. This operation consolidates the soil, closes up the seams of the furrow slices, and prevents, to a great extent, the harrow from tearing up the sod.

If danger is apprehended from the cut and grub worms, a top-dressing of two bushels of salt per acre will be found useful. Indeed, under any circumstances such top-dressing will be useful, as it will afford very acceptable inorganic food to the plants; besides which, it will increase the powers of the soil in the attraction and absorption of moisture from the atmosphere, and in this way operate most beneficially.

After the operations of harrowing and cross-harrowing shall have been performed, then the ground should be rolled. This done, it should be listed preparatory to dropping the corn; unless it should be contemplated to drill the corn, in which case the drills should be run north and south

*Depth of Lists, or Drills.*—The depth of the lists, or drills, should be from 3 to 4 inches.

*Distance of Rows.*—Upon this subject great diversity of opinion exists, and will exist so long as corn may be planted; but we think that 3 by 4 feet apart, or 4 feet at the furthest, are good distances; the first distance is the one we adopted, after trying several others; and where the soil may be naturally rich, or made so by manuring, we think it a safe one;—we also think that a distance which will conduce to profit, as if you expect a large product, there must be plants upon the ground to bear the ears of corn.

*Number of Stalks in the Hill.*—In manured land three plants should be left in each hill, so also may that number be left in land naturally very rich.

*Distance apart of drilled Corn.*—When corn may be cultivated in drills, the stalks should be about 12 inches apart; but land to bear such close planting must be liberally manured, broadcast, as well as in the drills.

*Manuring in the Hill.*—Independently of the broadcast dressing of manure, of which we have spoken, corn should receive a proportion of manure applied in the hill, to give an impetus to the growth and vigor of the plants when they first come up.

*Composts for the Hill.*—No. 1. Two loads of woods *mould*, or *marsh mud*, or *mould from head lands*, and 1 load of *stable manure*, 5 bushels of ashes, 1 bushel of *salt*, and 1 bushel of *plaster*, intimately mixed together, will give about a quart to each hill on an acre, and be sufficient to force the plants in the incipient stage of their growth—a most important point in corn culture, as it enables them to send forth their roots in all directions in search of food, and imparts vigor and power to their capacity for appropriating to themselves the food of both earth and air.

The same quantity of compost would answer for strewing along the drills, where corn may be then planted. Corn after it may have gotten 12 inches high derive but little sustenance from manure applied either in the hill or drills, as by that time its roots will have stretched far beyond such places of deposit; but notwithstanding this, it is highly important to apply food in these places, and for the reasons already assigned. If the plants commence their career vigorously, the season permitting, they are likely to continue it till they mature their fruit, and, as a consequence, the product will be greatly increased.

No. 2. Mix 50 lbs. of *Guano*, 1 bushel of plaster, 5 bushels of slaked *ashes*, and 1 bushel of salt, with three loads of either *marsh mud*, woods mould, ditch scrapings, or any other rich mould. Let the mixing be thorough, so as to produce an equality in the mass, and give to each hill a quart of the mixture at the time of planting, or at the first working. The former period we think best, as when then applied, the benefit is from the onset. These quantities are intended for 1 acre.

No. 3. Thoroughly mix together 50 lbs. of guano, 5 bushels of *slaked ashes*, 1 bushel of *salt*, and 1 bushel of *plaster*, and apply about a gill to each hill on an acre, either in the hill at the time of planting the corn; on the top of the hill at the time of planting, or at the first working. Application in the hill we should prefer, though either will be productive of much good.

MANURES FOR CORN—QUANTITIES PER ACRE.

We give the following *formulas* of manures for corn, *organic* as well as *inorganic*. The quantities and kinds named in each are intended for an acre of land to be planted in corn.

*In the Patent office Report for 1852 and 1853, there is a communication from Mr. James Campbell of Western, Somerset County, New Jersey, from which we extract the following, showing the efficacy of subsoil ploughing in a dry season—and we will here remark that its effects would be equally salutary, in a wet one.

Mr. Campbell says:—

"In the same field, I had some 15 acres, which were ploughed and subsoiled 22 inches deep four years ago, and 2 lands left that were not subsoiled, but in all other respects treated precisely alike—and the land all as nearly alike as possible as to quality. And we had no rains the past summer, to wet plough-deep, until the 25th of August; but the subsoiled land stood the drought, so that the corn scarcely ever twisted, while the portion which was *not* subsoiled was nearly all dried up. My land is a sandy loam."

No. 1.—400 lbs. of *Peruvian Guano*, 10 bushels of leached ashes, 2 bushels of *salt*, and 1 bushel of plaster, let the whole be thoroughly mixed together; then broadcasted over the ground and ploughed in speedily after it shall have been broadcasted. Or the guano and plaster may be mixed together and ploughed in, and the ashes and salt be mixed together broadcasted over the ground and harrowed in.

No. 2.—300 lbs. Peruvian Guano, mixed with 1 bushel of plaster, to be broadcasted over an acre, and ploughed in. Then harrow and broadcast over an acre 400 lbs. of *American Phosphate of lime*, or 200 lbs. of the *bi-phosphate* or *super phosphate* of lime, and harrow it in.

No. 3.—200 lbs. of Peruvian Guano, mixed with 200 lbs. of the *Bi-phosphate* or Super-phosphate of lime, to be ploughed in.

No. 4.—200 lbs. of Peruvian Guano, mixed with 1 bushel of plaster, to be ploughed in. Then top-dress with 200 lbs. of Mexican guano, and harrow it in—or the whole may be thoroughly mixed together and ploughed in, and a top-dressing be given to the acre of 10 bushels of leached ashes.

No. 5.—14 double horse cart-loads of marsh mud, river mud, or wood's mould, 7 double horse cart-loads of barn-yard or stable manure. These to be well mixed together, broadcasted, after remaining in bulk two or three weeks, and ploughed in. At the same time that a compost is made of the above,

Mix together 4 bushels of *bone-dust*, 10 bushels of *slaked ashes*, 1 bushel of *plaster*, 2 bushels of *salt* and 100 lbs. of the *nitrate of soda*, or the same quantity of the *nitrate of potash*. These, after the first named compost has been ploughed in and the ground harrowed, should be broadcasted over the acre and harrowed in.

No. 6.—20 loads of *stable manure*, 200 lbs. of *American Phosphate of lime* and 1 bushel of *plaster*, to be thoroughly mixed together, and ploughed in, and the ground harrowed. Then top-dress with 2 bushels of salt and 10 bushels of leached ashes.

No. 7.—20 double horse cart-loads of *stable*, or *barn-yard manure*, 1 bushel of *plaster*, and 200 lbs. of *American Phosphate* of lime, 10 bushels of *leached ashes* and 2 bushels of salt, to be thoroughly mixed together, and ploughed in.

No. 8.—10 bushels of bone dust, 10 bushels of *leached ashes*, 1 bushel of *plaster* and 2 bushels of salt, to be thoroughly mixed together, thrown into bulk and permitted to remain for two weeks, then to be broadcasted and harrowed in.

The bone-dust, in every case, when forming an ingredient of a compost, should be moistened with water before being added to the other substances.

No. 9.—Dissolve 10 bushels of bone-dust in Sulphuric acid, then mix them with 10 bushels of leached ashes, and 2 bushels of salt, broadcast them over the ground and harrow them in.

No. 10.—Dissolve 10 bushels of bone-dust with *Sulphuric acid*, and mix it with 10 bushels of *ashes* and 200 lbs. of *American Phosphate of lime*, top-dress, and harrow the mixture in.

No. 11.—4000 herrings or other fishes, 20 double horse cart-loads of mould of any kind, and 1 bushel of *plaster*, to be mixed together, thrown into bulk and permitted to remain 3 weeks, then to be cut down with hoes, shoveled over, broadcasted over the acre, and ploughed in.

No. 12.—50 double horse cart-loads of fresh seaweed, mixed with 100 lbs. of Peruvian guano, to be ploughed in.

No. 13.—400 lbs. of Peruvian guano, 1 bushel of plaster, 4 bushels of salt, to be mixed together, broadcasted, and ploughed in. Then top-dress with 20 bushels of leached ashes and harrow the ashes in.

No. 14.—200 lbs. of Peruvian guano, 200 lbs. of *American Phosphate of lime*, 1 bushel of plaster, and 10 bushels of leached ashes, to be well mixed together, broadcasted and ploughed in.

No. 15.—200 lbs. of *chandler's greaves*, 10 bushels of slaked ashes and 1 bushel of plaster and 2 bushels of bone-dust. These to be mixed intimately together and ploughed in.

[The Chandler's Greaves contain about 13 per cent of ammonia, besides sulphur, phosphorus and bone earth.]

No. 16.—10 double horse cart loads of pine shatters, 10 do. of marsh or river mud, 4 bushels of bone-dust, 10 bushels of leached ashes and 1 bushel of plaster, to be formed into compost layer and layer about, left in bulk two weeks, then to be intimately mixed together, by being shoveled over, spread broadcast, and ploughed in.

In the preceding *formulas* we have prescribed such quantities and kinds of manure as we believe will be required to produce a large yield of corn, and leave the ground in a condition of fertility calculated to bear all the crops, with good results, of a rotation, whether it may comprise 3, 4, or 6 years. Those, however, who may be content with smaller crops, can lessen the quantities according to their own judgments; we, in matters of this kind, prefer to give full doses, in order that, if the season should prove propitious, and Providence bless the husbandman with seasonable rains, his labors may be blessed with fruitful harvests; and here it may be proper to remark, that unless such rains occur, to dissolve the food in the soil, there will be a diminution of products, as the plants can only take up their food when in a gaseous or fluid state.

As we have recommended the combination of ashes with highly concentrated manures, and that fact may suggest a doubt in the minds of some, we will here observe, that *leached ashes* cannot operate injuriously, and cannot, under any circumstances, drive off the volatile gases formed by the animal matter of the manure, in the course of its decomposition, because the muriatic acid of the salt, as well as the sulphuric acid of the plaster, will combine with and so fix them, that they cannot escape into the air through the superincumbent earth, but will remain in place until taken up by the roots of the plants, and thus be economized by them as food. Leached ashes, being in a carbonate state, cannot drive off the ammoniacal gases—cannot operate harmfully. Again, if the soil in which the corn may be planted should be clayey, the alumina will unite with and retain such gases until appropriated by the roots of the plants. Whether alumina performs this office by its powers of chemical affinity, or by those of cohesive attraction—whether its absorbent and retentive powers refer to its chemical or physical and mechanical action, we look upon as altogether unimportant to the farmer and planter; it is sufficient for them, that the fertilizing, gaseous matters are, through its agency, retained in the soil as part and portion of the food of their crops; that being the point that presents itself to their consideration as being of value—the *modus operandi* by which the result is produced being but of secondary moment.

*Of the Cultivation.*—Upon this subject it is almost superfluous to remark, as nearly every neighborhood has its own best way; from which it is use

less to expect a departure. In this state of things, it may become us merely to state how we cultivated our crops, and we shall do this in a spirit of deference. Well then, after the ground was deeply ploughed, harrowed and rolled, we marked off the land 3 by 4 feet, and dropped 5 grains of seed corn at the intersection of each listing; put a small portion of nutritive manure, plaster and ashes, in each hill. When the corn came up and was a few inches high, we turned a furrow from either side of the rows, which we returned, sometimes at the time, and at others, left the returning of the furrows to the corn for a few days after. At the time of turning the furrows from the plants, the ploughmen were followed by hands, who weeded them by hand and hoe, relieving them of all weeds, and slightly stirring the earth around the plants. If the furrows were left to be returned some day ahead, which frequently occurred, the ploughs were followed by the cultivator to stir the ground and eradicate grass and weeds from the middles; men also following with hoes to weed immediately around the plants, and relieve such as might be covered, or partially covered with the plough. In a week from this time we put the cultivators in again, running them both ways, close to the plants to save the labor of the hoe men, who followed with hoes, to weed immediately around them, as before. At this time if the corn plants were large enough for the operation, we thinned them out, leaving 3 of the thriftiest and best placed plants in a hill. The after culture consisted in putting in the cultivators every eight or ten days, accompanied by the hoe men, so as to keep all weeds down, and the earth stirred and open to the influence of the weather, until we laid by the crop. In times of drought, we made it a point of duty always to keep the ground open to the influence of the atmosphere—always in a condition to drink in the dews. By this management, if the rains were seasonable, we never failed to secure remunerating crops. We acted upon the principle, *that large crops of corn were only to be obtained by plenty of food and cleanliness.*

We seize the occasion here to state, that it is our firm belief that he who undertakes to make a good crop of corn, or any thing else, by simply applying mineral or inorganic manures—unless his land be very rich—very fertile—will meet with a most lamentable failure. To grow a profitable crop, requires both animal and mineral manures to be applied. The soil must have in it both nutritive and mineral substances—it must have in it all the elements which enter into, and make up the entire plant.

*Oats.*—In many States where our journal circulates, before this sheet will reach our readers in those sections, it will be time to seed oats, and we therefore say to them, as well as all others, that if they wish to grow large crops, they must feed the soil on which they may grow them; for oats have mouths and appetites, the first as the medium of eating, the latter to be gratified.

With regard to preparing the ground—plough and pulverize as for corn.

With respect to manures, the same kind recommended for corn will answer just as well for oats—the quantities about one third less. A mixture of 10 bushels of *ashes*, 2 of *salt*, 2 of bones and 1 of plaster per acre, applied as a top-dressing, to be harrowed in with the seed is an excellent application for oats, but, independent of this, a good dressing of nutritive manures must be ploughed in. 200 lbs. of Peruvian guano, and 1 bushel of plaster, to be ploughed in—200 lbs. of American phosphate of lime, 10 bushels of ashes and 2 bushels of salt, the three latter to be mixed together and applied as a top-dressing, would, the season being moist, accompanied by seasonable showers, ensure a large yield of oats on an acre of land.

As to the *time of seeding oats*, that must depend upon the locality—when the frost is thoroughly out of the ground, and it can be worked to advantage, is the proper time for sowing oats every where—to prescribe a particular day is utterly futile. The early sown, all things else being equal, has the best chance of success.

As to *quantity of seed* we would say, that less than 2 bushels per acre should not be sown. The seed should be harrowed and cross harrowed in, and then rolled.

*Clover, or Clover and Grass Seed.*—If you intend sowing either one or the other, or both these seeds, with your oats, it might be well to delay this operation until the oats were up. In which case you may omit harrowing when putting in the oats. When the oat plants are up and have attained some 3 or 4 inches in height, then sow your clover seed, or clover and orchard grass seed, as the case may be. If you contemplate sowing both kinds, sow the clover seed lengthwise of the furrows, and the orchard grass seed crosswise. Then roll in the clover, and grass seed, and don't be alarmed at mashing down the oat plants, it will do them no harm; they will rise up in a few days, and if you have manured the ground with only a moderate degree of liberality they will produce you a good crop—and the stand of clover and orchard grass will be a good one.—We have seen this plan successfully tried.

When you cut your oats, give the clover and orchard grass a top dressing of 2 bushels of ashes, one bushel of bones, one bushel of salt and 1 bushel of plaster, per acre.

Recollect that clover and orchard grass make more and better hay than clover alone.

The quantity of seed per acre is 12lbs. of clover seed and 1 or 2 bushels of orchard grass seed per acre; the latter quantity the best.

The orchard grass seed before being sown should be spread on the barn-floor, gently moistened with water, poured on from the nozzle of a watering-pot, and left a day before being sown. Mix with it twice its bulk of ashes to seperate the seed, before sowing it.

*Sowing Clover Seed.*—If you have not already sown clover seed on your wheat, sow as speedily as possible—or wait until the ground, by the absence of frost, is in a condition to permit a team being put on without injury from poaching. Then sow your clover seed and roll it in. If the wheat field was ours, we would both harrow and roll the wheat after sowing the clover seed in it. These operations will do no harm, but, on the contrary, much good.

*Draining Wet Lands.*—We renew our advice to you to drain your wet lands, and commend to your attention and perusal an article on the "*Effect of Draining, Deep Ploughing, and Mixing Soils,*" which is published in this month's journal. As it speaks of *practical* results, and the effect of those results in a peculiar point of view—showing that by the above operations the rent-value of the land was increased from 5 shillings, to 40 shillings a year—the article is worthy of the consideration of every agricultural economist.

*Permanent Pasture.*—If you have no permanent

pasture, but have an old field on which sedge and poverty grass now grow, plough it up, and top-dress it with lime, 20 bushels per acre, then sow it down in buckwheat; when the buckwheat comes into bloom, plough it in, then sow another crop of buckwheat, and when that comes into bloom, plough that in as deep as your strength of team will allow, say 8 inches in depth, harrow your ground, then apply 200lbs. of guano, mixed with half a bushel of plaster, per acre, plough that in 4 inches deep, harrow and roll the land until it is reduced to fine tilth; then sow on each acre, 1 bushel of orchard grass seed, ¼ bushel Kentucky blue-grass seed, 1 peck of timothy seed, ½ bushel of tall meadow oats grass seed, and 3lbs. of sweet vernal grass seed. The orchard grass seed must be spread on the barn-floor, moistened, and permitted to remain a day, then be first mixed with twice its bulk of ashes, and then with all the other grass seeds, except the timothy. Sow the timothy seed first, the way of the furrows —the other seeds, when well mixed, sow cross ways the furrows. This done, give a top dressing of a mixture of 4 bushels of bone dust, and 5 bushels of ashes, and 1 bushel of plaster, per acre, harrow the whole lightly in and roll. If you cannot get the bone dust, you may substitute therefor, 400 lbs of *American phosphate of lime*, per acre, which, with the exception of the animal matter, is very similar in its constituent elements to bone-dust. Next Spring early, sow on each acre 12lbs. of clover seed, and you will have laid the ground work of a lasting pasture.

You may cut the crop of grass the first year; but should not permit your stock to put a hoof upon it until the second year. Every second year it should receive a top dressing of nutritive and mineral manures, which should be harrowed in, and the ground rolled. This operation is most beneficially applied in the fall of the year.

*Early Potatoes*—It is difficult to say when your early potatoes should be planted, as the *time* must be governed by locality and season. We have planted them as early as the 17th of March, but opportunities to do so in a climate so fickle as ours, do not often occur. As a general rule it may be safe to say, that *the time* for planting them, is, when the frost is completely out of the ground, and the soil can be worked thoroughly and well.

In preparing to plant them, it must not be forgotten of what their inorganic constituents consist, and the culturist must make it a point of duty to provide, in addition to whatever nutritive or animal manures which he may use, those substances which are demanded also, as inorganic food. The analysis of the potato show that 10,000 lbs. of roots, stalks and leaves, yielded 82.83 lbs. of ash, from the roots, and 308,04 lbs. from the tops, which were found to contain

| | In the roots. | In the tops. |
|---|---|---|
| Potash, | 40 22 | 81.9 |
| Soda, | 23.24 | 00.9 |
| Lime, | 3.31 | 129.7 |
| Magnesia, | 3.24 | 17.0 |
| Alumina, | 0.50 | 00 4 |
| Oxide of Iron, | 0 32 | 00.2 |
| Silica, | 0.84 | 49.4 |
| Sulphuric Acid, | 5.40 | 04.2 |
| Phosphoric Acid, | 4.01 | 19.7 |
| Chlorine, | 1.60 | 05 0 |
| | 82 83 | 308.4 |

The question then occurs, by what means we are to furnish the proper manures, organic, animal, and inorganic. The organic part can be supplied by stable manure, by barn yard manure, by any rich compost, or by Peruvian guano. Ten or fifteen loads of the three first, and 200 or 300 lbs. of the latter, will answer. These quantities are intended for an acre in potatoes.

All the *inorganic* manures could be furnished by
10 bushels of un-leached ashes,
2 bushels of Salt,
5 bushels of Lime,
1 bushel of Plaster,
100 lbs. of American Phosphate of Lime.

If we used Peruvian Guano as the *organic* manure, we would mix ten times its bulk of mould, and 1 bushel of plaster with it intimately and well, and apply it in the rows, or hills, whichever way the potatoes may be planted.

The ashes, salt, lime, plaster and American phosphate of lime, we would mix intimately together, throw it into bulk, and keep it under cover for use.

At the time of planting the potatoes, we would give the hills a dusting with the mixture. When the potatoes first come up, we would dust them again, as also at the first working, as well as at every subsequent one. Besides these dustings, we would dust the vines with the mixture at least every fortnight until the roots of the potato were ripe and fit to dig; not as a preventive against the disease or rot, but with the view of supplying them with their proper food, and thereby to keep up their constitutional vigor. Nostrums for, and preventives against, diseases, find very little countenance from us. The "*potato rot*," as it is called, has been a fruitful theme for Essayists, and we are free to confess, that, in our opinion, it has given birth to more nonsense than any other subject within our recollection. Volumes have been written, and hundreds of "*curatives*" and "*preventives*," discovered, and yet the matter is as much a mystery now, as it was before the learned potato-doctors, made their wonderful discoveries, and promulged their equally wonderful "curatives and preventives"!!—and so it will remain until it pleases Providence to remove the cause. Until then, all that man can do, is to provide the tuber with its appropriate food, both nutritive and mineral.

The ground should be ploughed, or spaded, deep, in which potatoes are planted, and be well pulverized, to admit of the free action of the air, and to encourage and promote the absorption and percolation of rain when it falls. If the ground be ploughed, it should be ploughed deeply, and subsoiled also. The soil should be a deep, porous loam, dry by its location and physical constitution, and should be protected from injury by excess of rains, and from long continued drought, by the deepening of the soil recommended.

*Artichokes.*—This is an admirable tuber for purposes of stock feeding, and should be extensively cultivated. The present month is the one in the South when they should be planted. Their cultivation is similar to that of corn or potatoes. The rows should be 4 feet apart, the plants stand in the drills 2 feet apart. A lot appropriated to artichokes should be kept for their culture alone, as when once planted they keep possession of the soil. A supply for the winter use of the stock should be dug up at the time when fall potatoes are dug; then the hogs should be turned into the lot, and allowed to root up their own food. While thus feeding they require no watering. It would be well however to keep

them supplied with charcoal, ashes, and salt. For this purpose a trough to contain supplies should be placed in the lot. An acre will yield 500 bushels, or more, if it be properly manured and cultivated. The quantity of seed per acre is from 12 to 15 bushels. The sets should be cut as those of the potato are.

*Fences.*—Examine these carefully, and have every panel requiring it repaired, so that there will be no doubt as to their resisting the assaults of breechy stock.

*Gates.*—Have all that require it hung effectually, so that there will be no difficulty in opening them, and a surety of their shutting of their own accord.

*Sources of Manure.*—Look to your materials for making manure, and busy yourself in composting such as may require it, to bring on the incipient stage of decomposition—that once commenced above ground, will be carried on after it shall be ploughed in, by the agencies of the air as it finds its way into the earth, and the salts of the earth beneath it.

*Hauling out Manure.*—Avail yourself of every opportunity to get such of your manure intended for spring crops, in place. With every 20 double-horse-cart loads of it mix 1 bushel of plaster and 2 bushels of salt.

*Liming and Marling.*—If your corn and oats ground require the aid of lime, as soon as you have ploughed it, give it a dressing of lime or marl.

*Sandy Lands.*—Ten loads of manure mixed with ten loads of clay, will act more beneficially on sandy lands than would 20 loads of manure without the admixture of clay.

*Orchards.*—Treat the trees in your orchards, as we advised last month.

*Animals, of all kinds*, should receive particular care during this month, as there is no month in the year that bears harder or more severely upon them.

*Tobacco Beds.*—Look to these, and seek for information how to manage them, in the admirable essays heretofore published in our journal.

*Winter-killed Grain.*—If you have any fields of winter-killed grain, harrow them with a light harrow, and roll them.

*Implements and Tools.*—Examine all these and have them immediately repaired. If you have not wagon, implement and tool houses, consult your interest and have them erected. In a few years they will save their cost, by making your wagons, carts, implements and tools last longer.

*Out-Houses.*—Cleanse and white-wash these.

*Hide-bound Meadows.*—If your meadows are hide-bound, have them harrowed, then top-dress them with a mixture, per acre, composed of 5 bushels of ashes, 2 bushels of bone-dust, or 200 lbs. of American phosphate of lime, and 2 bushels of salt. When you have applied this top-dressing, harrow it in and roll. This dressing should be applied as soon as the frost is out of the ground. The effect will be to increase your crop of grass from 50 to 100 per cent.

*Dead animals.*—If you should have the misfortune to have any of your animals die, have them skinned, sell their skins, and cut up their carcases into small pieces and compost them with woods' mould, marsh mud or any other kindred substance—a layer of mould, then a layer of meat; sprinkle plaster over each layer, and it will unite with the ammonia, prevent all noisome smell, as well as the escape of the fertilizing gases.

A dead cow, ox, or horse thus treated, will convert 20 loads of mould or earth into the most enriching manure. When the meat has decayed from off the bones, break them into small pieces and dissolve them, then mix them with 10 bushels of ashes, and 2 bushels of salt, and you may grow with your dead animal's bones from 20 to 30 bushels of wheat.

*Root crops.*—It is too soon to put these in, if intended for winter use; but not too soon to be providing the manure for growing them. Therefore, we would advise you to form composts to grow an acre of each of the following roots, viz: *mangle wurtzel*, carrots, parsnips, *common turnips*, and ruta baga turnips.—When the time comes for planting, we will tell you how to manage each crop. The best manure for them is that which is well rotted. For the turnips, bone-dust dissolved in sulphuric acid, according to the experience of English farmers is best.

*Preparation of Guano.*—If you have not a suitable sieve, procure one, before using your guano, pass it through the sieve, so as to separate the powdered portion from the lumps. Put the lumps into a heap, moisten them with a strong solution of salt and water, and let them remain a day in bulk, when they may easily be reduced to powder by the back of a shovel. Then mix the whole, in the proportion of one peck of plaster to every 100 lbs. of guano.

AMERICAN FARMER

BALTIMORE, MARCH 1, 1854.

TERMS OF THE AMERICAN FARMER.

$1 per annum, in advance; 6 copies for $5; 12 copies for $10; 30 copies for $20.

ADVERTISEMENTS—For 1 square of 12 lines, for each insertion, $1; 1 square, per ann., $10; ¼ column, do. $30; 1 column, do. $50—larger advertisements in proportion.

Address, SAMUEL SANDS, Publisher,
At the *State Agricultural Society Rooms*, No. 128 Baltimore st.
over the "American Office," 5th door from North-st.

MR. STABLER'S COMMUNICATION, AND COMMODORE JONES' ESSAY.—These papers, from their intrinsic merits, will, of themselves, command attention; but we bespeak for them the most profound consideration of our readers—they are alike full of interest and instruction.

POTATOES FROM THE SEED.—Mr. Daniel Shunk, Union Ridge, Carroll Co. Md. has for seven years past been raising the white and blue Mercer Potato from the seed, and has left with us a fine specimen—Mr. Shunk believes he has discovered a remedy for the potatoe rot—but is not disposed to make known his secret, but for a consideration. Be this as it may, however, he has shown us such testimony, as to induce a very favorable opinion of his potato—Mr. J. L. Billingslea, of Balt. Co. planted some last year, and says that whilst other varieties of the Mercers yielded very little over two to one, those of Mr. Shunk's yielded nearly nine to one.

*Amelia County, Va.*—A subscriber of this county, in remitting his subscription to the American Farmer, for the current year, remarks:—"I take pleasure in informing you that our lands in this part of Virginia are rapidly improving, for which state of things we are very much indebted to your valuable paper, and I freely confess, unless I could get another agricultural paper to supply its place, I would not be without it for twenty times its cost."

STATE AGRICULTURAL SOCIETY.—*Experimental Farm and Agricultural College*—The proceedings on another page, will be read with interest by the Farmers of the State.

It having been proposed in the Legislature to abolish the office of Agricultural Chemist of the State, the subject was brought before the Board of Managers of the State Society, when it was determined to ask the Legislature to endow a Professorship in the proposed College; and a committee was appointed to bring the subject in a proper manner before the Legislature, which has been done in an ably prepared memorial; and we hope in our next to be able to announce that some practical benefits are to be extended to the farming interest, through the liberality and justice of the State, as recommended by the Governor in his inaugural. A writer in the Marlborough Planter, after quoting the language of the Governor, makes the following remarks, which we commend to the special attention of the members of the Legislature:

"In these sentiments I trust the Legislature will fully concur, and place us at least on a footing with the Mechanics of Baltimore, who draw $500 annually from the Treasury to support their "*Institute*." This is as it should be; I approve the act; but now let the State give to the mass of her people—the *Planters and Farmers*— a few thousands to establish upon a firm footing an Agricultural College and Experimental Farm, which would do more for the advancement of the cause, and more largely benefit the farmer and his sons, than forty Geological, or Chemical, or Geographical Surveying Professors could accomplish in fifty years. Our sons could then cheaply receive a scientific education expressly suited to their future noble pursuit in life. I hope our representatives will immortalize themselves by devoting their time and talents to carrying out these enlarged and liberal views of our talented Governor."

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*North Carolina.*—One of the most distinguished sons of the old North State, who has served with much honor to himself and State, in the councils of the nation, subscribed for the Farmer some months ago—He has since ordered a complete set of the present series, and in doing so, pays the following compliment to our journal:

"I cannot withhold the tribute of my high approval of your paper—I consider it the best paper for agricultural information published in the Southern country—Its plain, practical character adapts it to the comprehension and application of almost every class of readers—thus rendering it useful to the class of small farmers, so numerous in our country.

"I intend trying to get you a list of subscribers in this county. I have engaged very actively and earnestly in the improvement of my land. I purchased 14 tons of guano last fall, which I used on my wheat, and I have just ordered 4 tons more for my oat crop this spring."

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SAND ON HEAVY CLAYS.—Upon very heavy clay lands, on the contrary, *sand* is laid in large quantities with equal success. Here the effect is the reverse of that on light sands. The clay is mellowed, made less retentive, dries sooner in spring, and does not bake so hard in summer. Such operations as these, in favorable situations, are very profitable; and although expensive at first, are in the end far cheaper than manuring in the ordinary way.—*Norton's Elements.*

CLAY ON LIGHT SOILS.—In situations where *clay* can be obtained, it is found to be the most valuable possible application for light soils; it consolidates them, causes them to retain water and manure, and for the objects of permanent improvement, is worth more, load for load, than manure.—*Norton's Elements.*

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*Erratum.*—In the article relative to Mr. Hewlett's improvement of his 16 acre field, we stated that he sold 18½ tons of hay—it should have been *straw*. The error, however, is not materisl, and does not affect the statement of *debit* and *credit*.

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GUANO AGENCY.—We are prepared to furnish Guano at the price of the Agents of the Peruvian government in this city—$50.21 per ton of 2240 lbs. with $1 commissions added, deliverable at the Guano wharf. We originally entered into this business to accommodate farmers who could not make it convenient to purchase in person—but from our experience in the business, we are induced to believe, that we can be instrumental in keeping it at a reasonable price to the farmer, after it leaves the hands of the importers—and farmers and planters will judge for themselves, as to the propriety of sustaining our enterprise. ☞ See our advertisement.

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A Subscriber at Wilmington, N. C. writes us as follows:

"Let me know how my subscription to your paper stands, that I may not get behind hand. I always look forward to the perusal of your paper with much interest. I regard it as one of the most useful, and best edited papers of the kind in the Union, and as I take several, I have some means of judging. It is more practical than most of them, and this is the most important to our farmers."

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BALTIMORE MARKET—*February* 28.

There has been a reaction in breadstuffs since our last, and prices have receded considerably. Flour, Howard st. is selling at $7.50; last sales of City Mills, $7.75. Rye Flour, $5.50a5.62. Wheat, red, $1.70a1.75—white, $1.78a1.80 for good to prime—inferior lots, 2 to 5c. less. Corn, yellow, 76c.—mixed, 73, and white, 75a80c. Oats, Pa. 52c.; Md. 48c. Cloverseed is declining—sales at $6.25a6 50. Timothy seed, $3a3.12. Flaxseed, $1.37. Whiskey, in hhds. 30a30½, and in bbls. 31a32c. Wool, unwash. 23a26c wash. 33a37c.; fleece, 40a50c. Cattle, to the butchers, ranged $3.50 to 5 on the hoof, equal to $7a9 75 net, & averaging $4.25 gross. Hogs, live, $6.75a7.25 per 100 lbs. There is a moderate but steady demand for all varieties of Naval Stores. Spirits Turpentine, 68a70c. per gal. cash and time. Tar, $2.75 per bbl.; Pitch, $2.50. Common Rosin, at $1.75; No. 2 do. $2; and No. 1, $3a4. Hay, $17 and $19 for prime baled, and from wagons, $15a17 per ton. GUANO, Peruvian, from the hands of the government agents, is selling at $50.20 per long ton, in lots of 50 tons—and from store at $47 per ton of 2000 lbs. Mexican is selling by importers at $35 per long ton, in lots of 50 tons, and by dealers at $33a$35 per ton of 2000 lbs. African sells from store at $38 per short ton. The supply is good, but there will no doubt be considerable demand during this month. Rice, $4.75 per 100 lbs. Sugar, N. O. $5.25a5.75. Tobacco, com. to good ordinary Md. $5 25a6,—mid. $6a6.25—good to fine brown, $6.50a7; and fine brown, $7a9—there is very little in first hands.

## EFFECT OF DRAINING, DEEP PLOUGHING, AND MIXING OF SOILS.

Johnston says, "that the Marquis of Tweedale, in his home farm of Yesters, has raised his land in value *eight times* (from 5s. to 40s. per acre,) by *draining* and *deep ploughing*. *After draining*, the fields of stiff clay, with streaks of sand in the subsoil, are turned over to the depth of 12 or 14 inches, by two ploughs (two horses each,) following one another, the under 6 inches being thrown on the top. In this state it is left to the winter's frost, when it falls to a yellow marly looking soil. It is now ploughed again to a depth of 9 or 10 inches, by which half the original soil is brought again to the surface. By a cross ploughing this is mixed with the new soil, after which the field is prepared in the usual way for turnips. But it is observed that, if the ploughing has been so late that the subsoil has not had a proper exposure to the winter's cold, the land on such spots does not for many years equal that which was earlier ploughed. The reason is, that when once mixed up with the other soil, the air has no longer the same easy access into its pores."

It would seem evident from the preceding successful experiment, that, in all stiff clayey soils, *draining should always precede deep ploughing*. Many stiff clays, which to the eye, do not appear wet, are in reality so surcharged with water, as to render them injurious to healthy vegetation; but which after being effectually drained, not only increase the quantity of their produce, but improve the quality also. Stiff clays, after being drained, should be permitted to remain sufficiently long to relieve themselves of their superabundance of water before very deep ploughing is tried upon them. The first year it would possibly be most prudent, to only plough so deep as would increase the depth of the surface soil some two inches. After the first year, it would not only be perfectly safe to plough 8 or 10 inches in depth, but to subsoil some 6 inches more. When these latter depths shall have been reached, we think there can be no question but that cross-ploughing two-thirds the depth would prove to be a valuable auxiliary to the intended improvement of the soil. At this cross ploughing we would apply the manure.

Those who have been in the habit, when ploughing their land, to merely *skim* and *scratch* it some 2, 3 or 4 inches deep, will, of course, enter their protests against such deep ploughing, and utterly reject the idea of cross-ploughing; but in despite of the dissent of such persons, we unhesitatingly say, that such preparation of the soil will pay—aye, pay well.

Each ploughing should be followed by thorough harrowing and rolling, so as to reduce the soil to the finest state of division, as the more perfect the pulverization, the freer will the access of the oxygen of the air, and the greater and more beneficial will be its action in the work of melioration upon the soil and the plants growing therein. Without copious supplies of pure air, animal life cannot prosper, neither can that of the cultivated crops.

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*Large Hogs.*—We recently noticed a lot of large hogs, slaughtered in Talbot County, Md. George W. Washington, esq., of Hampshire County, Va., has slaughtered a lot of 32 hogs, the stock of which was purchased as the Irish Grazier, 13 of which at 15 months old averaged 304½ lbs. and 19 slaughtered one month earlier, 262 lbs.

## BONES AS A MANURE.

We gave last year a very able paper upon this subject, which we copied from Stephens' *Farmer's Guide;* but as we have been frequently written to since for information, we copy the views of professors *Norton* and *Dana*, both reliable authorities, and commend them to our readers. Professor Norton, says:—

"There is one important part of the animal yet unnoticed, that is the bones. Their composition is, when dry, earthy matter about 66 lbs. in 100; organic matter that burns away, about 34 lbs."

"This earthy matter consists for the most part of phosphate of lime, that is, lime in combination with phosphoric acid. These are two most valuable substances for application to any soil."

"The organic part is called *gelatine* or *glue*; this is boiled out by the glue makers: it is extremely rich in *nitrogen*, and is therefore an excellent manure. We thus see, at once, how important a source of nourishment for our land is to be found in bones. They unite, from the above statement, some of the most efficacious and desirable *organic* and *inorganic* manures. Both of these parts are fitted to minister powerfully to the growth of the plant."

"When the bones are applied whole, the effect is not very marked at first, because they decay slowly in the soil: it is also necessary to put on a large quantity per acre. The best way is to have them crushed to powder, or to fine fragments, in mills. Ten bushels of dust will produce a more immediate and abundant result than 80 or 100 bushels of whole bones, although of course the effect will be sooner over. An advantageous way of using them is to put on 8 to 10 bushels per acre, and half the usual quantity of farm-yard manure."

"Boiled bones that have been used by the glue makers, are still quite valuable; they have lost the greater part of their gelatine, but the phosphates remain, and the bones are so softened by the long boiling that they have undergone, as to decompose quickly, and afford an immediate supply of food to plants."

"Another most important form of applying bones, is in a state of solution by sulphuric acid, (oil of vitriol). This is a cheap substance, costing by the carboy not more than 2½ to 3 cents per lb. To every 100 lbs. of bones, about 50 to 60 lbs. of acid is taken. If bone dust is used, from 25 to 45 lbs. of acid is sufficient. The acid must be mixed with two or three times its bulk of *water*, because if applied strong, it would only burn and blacken the bones, without dissolving them."

"The bones are placed in a tub, and a portion of the previously diluted acid poured upon them. After standing a day, another portion of acid may be poured on; and finally the last on the third day, if they are not already dissolved. *The mass should be often stirred.*"

"One good way is to place the bones in a heap upon any convenient floor, and pour a portion of the acid upon them. After standing half a day the heap should be thoroughly mixed, and a little more acid added; this to be continued so long as necessary. It is a method which I have known to prove very successful."

"In either case the bones will ultimately soften and dissolve to a kind of paste; this may be mixed with twenty or thirty times its bulk of water, and applied to the land by means of an ordinary water

cart. Used in this way, it produces a wonderful effect upon nearly all crops.

"A more convenient method in most cases is to thoroughly mix the pasty mass of dissolved bones with a large quantity of ashes, peat earth, saw dust, or charcoal dust. It can then be sown by hand, or dropped from a drill machine. Two or three bushels of these dissolved bones, with half the usual quantity of yard manure, are sufficient for an acre. This is therefore an exceedingly powerful fertilizer. One reason for its remarkable effect is, that the bones are by dissolving brought into a state of such minute division, that they are easily and at once available for the plant. A peculiar phosphate of lime is formed, called by chemists a *superphosphate*, which is very soluble, and in addition to this we have the sulphuric acid, of itself an excellent application to most soils."

"Bones are useful in nearly every district, and are peculiarly adapted to all, or at least most of those situations, where the land without heavy manuring no longer bears good wheat or Indian corn, or other grains. In a great majority of cases, where land is run down by grain cropping, the use of bones in some of the forms above mentioned, is of all things the most likely to meet the deficiency. It will be remembered that the ash of grain is peculiarly rich in phosphates; consequently, as grain is generally sold off, the phosphates are most readily exhausted; in bones therefore we find just the manure for restoring them, and with little expense. This has been already the case in some parts of the country, and with the most encouraging success.—I would particularly recommend farmers to experiment with bones dissolved in sulphuric acid. The dissolving them is a simple business. The cheapness of this manure is a great recommendation.—Two bushels of bones would not certainly cost more than $1; then say 50 pounds of acid to dissolve them would cost by the carboy, $1,50, making only $2,50 for a quantity quite sufficient for an acre, with half the usual dressing of farm-yard manure. It would be worth almost as much as this, to cart the common manure from the yard, to say nothing of its value. There are few farms on which bones enough might not be collected in the course of a year, to help out in this way the manuring of several acres."

"Bones may not only be applied successfully to the ordinary cultivated crops, but also to meadows and pastures. In some of the older dairy districts a few bushels of bone dust per acre will at once restore worn-out pastures. The reason is, that the milk and cheese, which are in one form or another sold and carried away, contain considerable quantities of phosphates in their ash. These are restored to the land by bone dust. It is calculated by Prof. Johnston, that a cow giving 20 quarts of milk per day, takes from the soil 2 lbs. of phosphate of lime or bone earth in each week. There would thus be required three or four pounds of bones to make good this loss. If it is not made good in some way, the rich grasses after a time cease to flourish; being succeeded by those which require less phosphate of lime, and therefore do not furnish, when eaten by the cow, so rich or so abundant milk."

### As to Boiled Bones.

*Dana*, one of the ablest and most exact chemists of the age, holds the following views as to the value of boiled bones:

"It is a common opinion, that bones from the soap-boiler have lost a large portion of their animal matter. *It is erroneous.* Boiling, except under high pressure, extracts very little of the gelatine, and not all the fat and marrow. Heads and shoulder-blades, and the smaller bones, still contain, after boiling, 3½ per cent. of fat and tallow. If the phosphate of lime of such bones is dissolved out by acid, the animal portion remains with all the form and bulk of the bone. Bones which are offered in the market, are quite as rich in the elements above stated, as are unboiled bones. The phosphate of lime is rendered quite soluble by its combination with gelatine and albumen."*

*Two bushels of dissolved bones, intimately mixed with 10 bushels of ashes, has been found by experience to be sufficient to manure an acre.—*Ed. American Farmer.*

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Burnt Ordinary, James City Co. Va., January 17th, 1854.

*To the Editor of the American Farmer.*

Dear Sir:—Enclosed I send you one dollar, my subscription to your valuable paper, the American Farmer, for the present year, (1854.) I take the occasion, after the manner of many of your subscribers, to trouble you with two or three little matters, though forsooth, you seem utterly regardless of trouble, when either information or assistance is required by your correspondents.

On the light, sandy lands of this region, we have a noxious grass, known by the name of *sand-bur*, which springs up annually (I think from the seed). It bears for its seed a thick bunch of burs, each one of which is covered with prickles as sharp as a cambric needle, and almost as hard as steel; these prickles too are baited like a fish-hook, the baited point however being so minute as to be invisible to the naked eye, and when the bur sticks into the flesh, it gives acute pain, and is difficult to extract. Altogether, this sand bur is a terror to all bare feet, prevents the hunting of dogs upon the ground where it grows, and renders it useless for grazing. We have also another pest with us, called the bamboo; this is a dwarf bramble scarcely growing more than a foot high, and running on the ground, taking complete possession of it.

This and the sand-bur above mentioned, we have found it difficult, if not impossible to extirpate, and you will much oblige me, by making known through the Farmer, some means of getting rid of them.

Will you at the same time do me the favor to inform me if there is any substitute for the green-clover crop for soiling in the spring and early summer, as our clover hereabout was destroyed by the last summer's drought. Will millet be a good succedaneum, or what? And if so, when should it be seeded, and how?

Very respectfully your obedient servant.

L. T. W.

We have no remedy for the "Sand-burs" but a radical change of the physical constitution of the soil. If any of our readers know of any, we should be pleased to receive a communication upon the subject.

*Rye* sown in the month of August, or September, would make an early spring soiling crop, and Millet, sown in early spring, would prove a good resource for early summer soiling. The soil in which the latter may be seeded, must be dry and highly manured. But for permanent soiling purposes, Lu-

cerne would be the plant. The ground in which it is grown should be dry, ploughed 8 inches deep, and subsoil ploughed 6 inches more; made perfectly fine by harrowing. Before ploughing, it should be heavily manured, and after being ploughed should receive a dressing of lime, sowed with 2 bushels of oats and 20 lbs. of lucerne seed to the acre, which should be harrowed in and rolled.

For the American Farmer.

THE MANGE.—This disease I am told, is much more troublesome with hogs in the Southern States, than it is in the North; when once a sty becomes infested with it, it is almost impossible to eradicate it, yet by repeated applications of lime wash, it can be done. The best preventives that I have knowledge of, and those that I have for years applied with success, are, in the first place, to have a board floor in the sleeping apartment of their sty, then a moderate supply of wheat straw well strewn over with ashes, at least twice a week, being careful to remove all of the old bed on applying the new. I also use all of the soap-suds made from the washing of clothes, &c., in mixing their feed. If they are inclined to mange, I use freely of sulphur in their feed.

Hogs are frequently annoyed by what is commonly called *kidney worms*—when this is the case, they devour their food eagerly; yet remain lank or poor. For that I use copperas pulverized and mixed with their food, say a teaspoon full daily to each animal for a week, or even more, unless his condition is bettered. In it there is nothing to fear; it will not injure a healthy animal—By adhering to these directions, with a good breed, with just attention to feeding in winter, and a good supply of clover for summer, owners may be at all times ready to exhibit to their friends their swine.

PRESERVING BACON FROM THE FLY.

*To the Editor of the American Farmer.*

I am induced by motives which every housekeeper will appreciate, to communicate through your valuable journal, the following effectual and simple method of preserving bacon from injury by the fly or skipper.

When your bacon is smoked early in the spring before the fly has made its appearance, take quick lime slaked to a dry powder, and rub the meat thoroughly on every part with it, leaving it adhere as much as possible; hang up your meat, and rest secure from any trouble from insects.

I have tried the above method (communicated to me by an experienced housekeeper) and so well satisfied am I with the experiment, that I consider it of sufficient importance to be made public. I have tried many other means for preserving meat from the fly, but this is the only certain remedy I have ever yet found.

Very truly yours,
AUG. SHRIVER,
Farm Content, Carroll Co. Md. Feb. 2, 1854.

*To Prevent Potatoes from Rotting.*—In a recent conversation with John C. McVean, of Scottsville, N. Y., he informed us, that last fall at the time of harvesting the potatoes, he put two heaps in the cellar, dusting one of the heaps with *quick lime* as they were thrown in from the wagon. The potatoes in this heap kept well, while those in the other, not limed, nearly all rotted. We have observed experiments recorded, giving like results.

## SAVING CLOVER SEED—ECONOMY IN THE USE OF AGRICULTURAL MACHINERY.

HAREWOOD, 2d Month 15, '54.

*To the Editor of the American Farmer.*

As requested at our recent interview, I will briefly give my "mode of harvesting clover seed with the Mowing machine, and also the manner of preparing the seed for market." I will also add a few remarks as to the decided economy to farmers, of machine over hand work, in securing our crops.

A large portion of my crop of clover seed the past season was so fallen and lodged, that scarcely half the seed could be saved with the cradle; consequently, we were compelled to resort to the slow and expensive mowing with scythes, or use the machine. The trial with cradles, resulted in breaking out the fingers, and leaving much of the best seed uncut; the scythe was both too slow and too wasteful. Indeed to look over the fallen and tangled mass of vegetation, persons unacquainted with the machine would have supposed it impossible to cut it clean, with any thing short of the scythe.

The machine (one of Hussey's improved) was set to cut rather higher than for mowing, and by a side delivery of my own construction, the seed was delivered at the side and out of the track, in straight loose bunches in the best possible order for curing and taking up afterwards: and with almost the precision of clock work. It was one of the most beautiful and perfect farm operations I ever saw—scarcely leaving a head standing to the acre, and literally leaving nothing for the rake to glean afterwards. It was completely cut and raked, in about one-third the time the same hands could have properly raked it alone. We would occasionally, though not often necessary, throw out of gear, pass on through the cleared track, and only cut across and against the lean; in this way every head raised up 4 to 5 inches high, or above the guards. [snakes heads included] was not only cut, but *saved* on the platform. We could well afford to lose a little time in this way, when the machine was doing the work of full ten to a dozen scythes.

The seed is usually left from 5 to 10 days in this state, in order to make it hull more readily; and a shower or two on it, improves it both for the threshing and hulling operations. At a leisure time in winter, and in cold dry weather, we pass it through the common wheat thresher to separate the heads from the straw. If in good order for threshing, the spike concaves are removed, and blank ones substituted in their places, which answer a better purpose; avoids cutting up the straw, and rendering the raking much less tedious.

The next operation is the hulling; this is done either by running it two or three times through the same machine (spike concaves replaced) as fast as it can be forced in by a board fitting the opening, and having a short handle in the centre, 15 or 18 inches long. It is then fanned, when the unhulled seed, falling near the fan, and being much reduced in bulk, may all soon be hulled by passing 4 or 5 times through the machine; or secondly, by an opening to feed in the front of the thresher, about 9 or 10 inches wide, and another opening at back, at the opposite end of the cylinder, the chaff passing diagonally through: but this plan without much care, is very apt to cut or break too much seed; neitheir does it save much time, as the feeding is necessarily slow.

An efficient machine that will hull and fan at the same operation is a great gain; for the hulling alone is a short job compared to the fanning. I used a hulling machine this year for experiment, instead of the thresher, (without fan attachment) but lost considerable seed; perhaps a bushel or more from cutting the seed. It is a tedious, and very annoying operation from dust, to hull with the thresher and fan afterwards; but all the portable clover machines with fan, that I have seen, cost from $75 to $100,—too expensive for general use, and often cutting the seed. I am satisfied, however, after some years experience with the crop, that an efficient and durable machine with fan, may be made for about half the money.

My crop of seed this season on seventeen acres, yielded 43 bushels cleaned and ready for market: besides sowing a large cart load of partially hulled chaff, not considered at the time worth hulling over, but proved afterwards by hulling a similar lot, to contain from 3 pecks to a bushel of seed; without close attention, considerable loss may occur in throwing out the chaff, or sowing the seed too thick, in the chaff. The crop at the present market value, is worth near $300; and did not cost me, all expences included, over $15 to $20; two-thirds to three-fourths of this, is chargeable to the in-door work.

The average yield on so many acres is rather unusual; the more so, as over half the ground had produced two crops of grass, and on several acres of this the clover seed was quite light. I attribute it to two causes; first, to the liberal use of lime; for without it, the yield would not have been a peck of seed to the acre; at least the land never produced any to my knowledge, previous to my liming; nor in fact half a crop of any thing else for me, except briars, broom sedge and sassafras bushes. And what is quite as much to the purpose, this single crop of seed amply repays me for all the lime, bones, and other manures used in renovating the land. To judge by the general appearance of the crop, probably two-thirds of the seed, or some 3 to 4 bushels to the acre, was grown on about eight, of the seventeen acres; it being the first crop of seed, and having one hundred and fifty bushels of lime to the acre, in two applications; and on this portion of the land, doubling the lime has certainly more than doubled the product in grass and seed;—in fact, of all the crops. And secondly, to the use of this most valuable implement, the mowing machine.

In this crop of seed, and the grass crop, just preceding it, the *saving* was not less than $50—I think more, and that it is susceptible of easy demonstration. To have secured the seed crop with the scythe, would have cost me one dollar an acre, besides the cost of hand raking; added to this, is the loss in seed from shattering off, and certainly not less than one peck to the acre, or 4½ bushels; equal to $50 in wages and loss of seed, before leaving the field. Now with the machine, two hands cut the whole in a day and a half, saving the raking entirely, and consequent loss; doing the work in from one eighth to one tenth part of the time, and doing it much more perfectly, and with materially less loss in seed, than was possible with the cradle or scythe, and rake.

If "Poor Richard" said truly in his Almanac, that "a penny saved is two pence clear," my case is nearly made out: but permit me to recur again to the grass crop on the same ground, and including two or three acres more than was cut for seed. This was much heavier by reason of the timothy, and even worse lodged than the seed crop; generally estimated by those who saw it, to yield 2½ tons to the acre, or some 45 to 50 tons. The whole was cut in about 1¾ days—it was cut by horses, raked by horses, and unloaded in the barn by horses, without oppression to man or beast, *and without costing me a single dime for harvest wages*; in fact, during the whole of the hay harvest, we were short by one hand of what we often have hired at other times. Nor is this all; but for my machinery, probably half the crop would have been spoiled, or greatly lessened in value; as owing to the dry weather the crops of grain and grass generally ripened at the same time, and the supply of hands was not half equal to the demand. Besides securing our own crops in fine order and in due season, we had leisure to help out a neighbor or two; one of whom remarked, that if I could not cut his grass, or some 8 or 10 acres of it, he must leave it uncut, as he could not procure hands.

I am therefore satisfied that in the grass and clover seed crops alone, the past season, the machine has saved me fully half its cost; to say nothing of any gain by its use in the grain crops, or the feeling of independence, and the satisfaction of having the work done at the proper time.

The two past seasons, we have cut over 130 acres of grass; two crops of wheat, and two of oats; quite sufficient I think to test fairly the merits, and to prove the economy of the mowing machine over the scythe, either on small or large farms. The machine has been carefully used, and has not cost twenty-five cents in repairs, for all this work. It has *not* been, as I have repeatedly seen Hussey's Reaper, forced over stone heaps, pitched into gullies with the knives cutting through banks of earth, and all brought up standing by driving against rocks and stumps; and to my amazement, when I expected a complete wreck, the machines were backed off with as little ceremony as an ox cart, the horses whipped into a trot, and the work resumed, as perfectly as if no impediment had occurred.

The great difficulty with many who are disposed to use machines, is as to the best selection, when so many new inventions and alleged improvments are being made. Without intending to detract from the merits of any, I will remark, that I visited the Crystal Palace at N. Y. last fall, mainly with the view to examine the many Reaping and Mowing machines on exhibition. The result of my observation was, for strength, durability, and efficiency as a combined machine, I saw none that was preferred to my own, improved as it now is. The Reaper, however, is not considered complete, until hand raking is superceded by machinery, and delivering at the back or side at pleasure, and without the reel; which is strongly objected to as cumbersome, very liable to get out of order, and shattering much grain when fully ripe. Whoever can effect this at the least cost, and most durability, will be well paid for his ingenuity and skill: as it will probably be the means of introducing ten machines where one is now in use.

With a scarcity of hands in harvest, it is at times very desirable to deliver the grain at the side; we now do it very satisfactorily with one hand, in clover seed, oats, and light grain; but in heavy wheat, it should be done by machinery if practicable, and the more powerful muscles of the horse. I am fully aware of the difficulties attending it;

but after seeing what has been done so successfully already in the cutting, I do not quite despair of the raking, although so many have attempted it, and failed. To succeed, the machinery must *not* be complicated, expensive, or liable to get out of order; nor must it materially affect or retard the free motion of the driving wheel and knives; to do either, will cause the latter to clog or choke, and occasion much detention, if not breakages. It must also be accommodated or adapted in some degre at least, to the constantly changing position of the grain, ground, wind, &c.

In the opinion of many, Atkins' Automaton Self-raker has solved the problem of its practicability, under favorable auspices. As to the question, "Have you seen it at work, and will it meet or supply the wants of the farmer?" I would answer, that I have only seen the machines on exhibition, and not in the field, where alone it can be judged of properly. It is an admirable piece of mechanism; but I fear too expensive an addition to the Reaper, and probably too complicated, to come into very general or common use, with a class not proverbial for mechanical tact and skill; or for "having a place for every thing, and every thing in its place." I have often seen expensive implements,—and even the Reaper, left in the field, "reposing on its laurels," exposed to all weathers, and from season to season. If the machine fails in its allotted duty at a busy season, as fail it must with such, and even rougher usage, is it fair or just to lay the blame on the manufacturer? It certainly is not, but is oftentimes done notwithstanding. A practical experience of some twenty-five years, as a machinist, has made me as familiar with machinery, as with farming; and I honestly express the opinion, that the sins of *omission*, by implement makers, are far less, than those of *commission*, by the ignorant and thoughtless who commonly use them.

No subject connected with Agricultural Improvement, has claimed so much of my attention and interest for several years past, as perfecting the Reaping and Mowing machine; and substituting machinery for hand labour on the farm, wherever practicable. That I have succeeded to some extent,—at least in *saving money*, I am perfectly satisfied. In reference to the machine raking, I may remark incidentally, that a working model has recently been submitted to me, and delivering at the side, that promises, *with* the reel, and under favouring circumstances, better than any thing I have yet seen; it can be made for $15 to $20 only, and perhaps as durable as other parts of the Reaper. It requires however, to perfect it, in my opinion, to throw the rake forward, over, and into the uncut grain, like the hand rake, thus dispensing with the reel. The inventor thinks he can do this also; but it can only be proved in the field, not the workshop; by an operating and efficient machine, not a model.

There is however one thing that must be borne in mind by those who would use mowing machines to the best advantage: it is absolutely necessary to farm neatly,—to clear the ground from stone, stumps, and abrupt inequalities on the surface. For a *Farmer* to expect to mow close and clean, without the trouble of picking up the stone, and with the knives cutting through earth and gravel, is about as reasonable, and *as profitable* too, as for a mechanic to undertake to plane up his boards covered with grit, or driven through with nails.

I am, respectfully,

EDWARD STABLER.

## MARYLAND STATE AGRICULTURAL SOCIETY.

The regular quarterly meeting of the Board of Managers of the Society was held 1st Feb., Chas. B. Calvert, Esq. in the Chair.

Mr. J. Merryman, of Baltimore Co. offered the following resolution, which was read and concurred in:

*Whereas*, This Society has heard with regret that an application has been, or is about being made to open a road through the State Agricultural Show Grounds, and as such a road would be ruinous to those grounds, therefore

*Resolved*, That the Legislature be memorialized to refuse its assent to any such application, and that Messrs. J. Merryman and N. B. Worthington be appointed to carry into effect this resolution.

On motion of S. Sands, seconded by Mr. A. B. Davis, it was

*Resolved*, That a memorial be presented to the Legislature of Maryland, asking that the Maryland State Agricultural Society be placed on the same footing with the Maryland Institute, by an annual appropriation from the State Treasury.

A communication was received from Messrs. Key, of St. Mary's, and Dick and Gunton, of Montgomery, Committee on Essays on the Renovation of worn out Lands, in which they awarded the premium to Com. Ap. Catsby Jones, of Va., with the recommendation that all the Essays presented be published, as they contain good instruction and advice to the agriculturist; but that of Com. Jones gives more of instruction, interest and warning, as to manures, &c. The report was accepted, and the premium awarded accordingly.

No reports were received from the committees on other subjects.

Mr. Sands called the attention of the Board to the proposition now before the Legislature of Maryland, to abolish the office of Agricultural Chemist for the State, and moved that the views of the Board upon the subject be laid before the Legislature.

After some conversation upon the subject, in which several members of the Society present were invited to participate, Mr. J. C Walsh, of Harford, offered the following resolution, which being seconded by the President, Mr. Calvert, was adopted *nem. con.*

*Resolved*, That the Legislature be memorialized to pass a law appropriating a sufficient sum of money for the endowment of a Professorship of Chemistry in the Agricultural College contemplated to be established under the auspices of the Maryland State Agricultural Society.

The following gentlemen were appointed by the Chair a committee to present the memorials in behalf of the Society to the Legislature, viz:—Messrs. A. B. Davis, of Montgomery Co.; Dr. Wharton, of Baltimore county; James T. Earle, of Queen Anne's county; Henry Carroll, of Baltimore Co.; N. B. Worthington, Anne Arundel Co.; George Gale, of Kent Co., and J. C. Walsh, of Harford county

Mr. Calvert, President, after alluding in appropriate terms, to the handsome and efficient manner in which Governor Ligon, in his Inaugural Address, had urged upon the State the propriety of fostering the Agricultural interest, offered the following resolution:

*Resolved*, That as Agriculturists, we have seen

with great pleasure the recommendations contained in the Governor's Inaugural in favor of the great cause of Agriculture, and in returning him our sincere thanks for the interest he has manifested, we trust the Legislature will carry out his recommendations.

Mr. A. B. Davis, Vice President, from Montgomery Co. seconded these resolutions, and bore testimony of his personal knowledge to the interest which Governor Ligon feels in behalf of the cause of Agriculture. The resolution was unanimously adopted.

Mr. Walsh, of Harford, offered the following resolution, which was adopted.

*Resolved*, That a committee of three be appointed by the Chair, of which the President shall be Chairman, to wait upon the Governor and furnish him with a copy of the above resolution.

The President being unable to visit Annapolis, appointed Messrs. Walsh, A. B. Davis, and Merryman.

The President stated to the Board that he had received enquiries in reference to the particular terms upon which subscriptions were to be made to the contemplated Agricultural School and Experimental Farm, and deemed it advisable that the Board should take the subject into consideration.

Various suggestions were made, by gentlemen present, as to the most efficient plan of operations, to establish the College—when the following resolution, offered by Mr. J. H. McHenry, of Baltimore, was unanimously adopted, and Messrs. J. H. McHenry, J. Merryman, Jr., and Hugh Gelston were appointed the Committee.

*Resolved*, That a Committee be appointed to draw up some plan upon which stock subscriptions to the proposed Agricultural College shall be invited, and to report the same on Thursday evening, the 9th of Feb.

Mr. R. McHenry, of Harford Co. offered the following resolution, which was also adopted, and Messrs. R. McHenry, W. W. Glenn, and J. Brune, of Baltimore, were appointed the Committee.

*Resolved*, That a Committee of three be appointed to prepare an address to the citizens of Maryland, setting forth the object and advantages of the proposed Agricultural School, and soliciting contributions and other aid.

Mr. Walsh, from the committee appointed to correspond with our government, on the subject of the Guano trade with Peru, presented a report, which was read, amended and accepted, and the following resolutions, which were adopted, and ordered to be published with the report:

*Resolved*, In the event of a refusal on the part of the Peruvian Government to enter into such an arrangement with this country as will allow of a free and unrestricted trade in the article of Guano, that the National Executive be requested to make a proposition to Peru, looking to the purchase of that portion of its territory containing the Guano Deposits, or a part of the same, and that the Senators and Representatives in Congress from this State be also requested to give their assistance in carrying said proposal into effect.

*Resolved*, That the Committee having in charge the matter of the Guano trade, be directed to have a copy of the above resolutions presented to the President of the United States, and also to the Senators and Representatives in Congress from this State.

To CHARLES B. CALVERT, Esq. President Maryland State Agricultural Society:

In compliance with a resolution of the Society, passed 13th of December, requesting the Committee appointed for the purpose of urging upon the National Executive the importance of effecting some arrangement with the Peruvian Government, that would tend to the establishment of a trade in the article of guano, which would, at the same time, ensure a steady and regular supply, and at the lowest rate of price, to report what progress has been made, the undersigned would respectfully state that, being deeply impressed with the highly important duty assigned to it, the Committee, immediately upon its appointment proceeded to act in the matter, and in an interview with Mr. Clayton, then Secretary of State, were assured by that gentleman that every effort should be made by the Government to effect the desired object, and your Committee with pleasure refer to Senate Ex. Doc. No. 59, 1st session 31st Congress, for what action was had at the time. The death of the President happening shortly after, the consequent change in the Cabinet deprived our agricultural community of the services of Mr. Clayton, who, the Committee must in justice say, evinced every disposition to give all the weight of both his private and official position, to accomplish a satisfactory arrangement with the Peruvian Government.

Your Committee communicated both in writing and personally with the succeeding administration, and received assurance of its desire to do everything within its power to satisfy the farmers and planters of the country. Nothing however was effected. Through respect to the dead, no allusion will be made to the "Lobos" affair, save that its occurrence was to be greatly deplored, from the evident bearing it would have to retard if not to entirely defeat any movement that might have been made looking to any new arrangement with Peru in regard to a more advantageous trade in guano.

Shortly after the present administration assumed the direction of our national affairs, your Committee again called attention to the matter confided to its charge, by letter addressed to the Secretary of State, Gov. Marcy, and to which letter the following reply was received:

DEPARTMENT OF STATE,
Washington, December 6, '53.

To JOHN CARROLL WALSH, Esq. Harford County, Maryland:

Sir:—Your letter of the 4th of May last, of which you have transmitted a duplicate, was duly received and an answer was returned. It stated in substance that the Department appreciated the importance of cheapening the price of guano to consumers of that article in the United States, and would endeavor to accomplish that object by means of further negotiations with the Government of Peru. I now have to inform you that instructions for that purpose were some time since forwarded to the United States Minister at Lima.

I am sir, very respectfully,
Your obedient servant,
W. L. MARCY.

Since the receipt of the above communication, from the Department of State, your Committee has had the honor of a personal interview with Mr. Marcy, the head of that Department, who assured it that the matter had engaged the serious consideration of the Government, and that every

proper opportunity should be embraced to secure from Peru such a trade in guano that would meet the views and wishes of the agriculturists of the country.

In conclusion, your comittee beg leave to remark, that it properly and gratefully appreciates the confidence evinced by the Society in placing in its hands the important duty entrusted to it, and trust to be able, before it asks to be finally discharged, to report that the Peruvian Government, yielding at last to the dictates of a wise policy, has consented to enlarge the sphere of consumption by enabling the consumers to buy guano at the lowest rates of price, and by placing itself in a condition to supply the demands of all those who come there in search of it, and affording them every facility for obtaining it. To the attainment of such an end, your Committee will devote all the energy and ability that it can bestow, and will consider itself amply repaid if its labors should aid in the slightest degree the accomplishment of what the Society sought at the time of its appointment.

JOHN CARROLL WALSH, Ch'n.

The Board then, on motion, adjourned.

Test:—SAML. SANDS, Sec'y.

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AGRICULTURAL COLLEGE AND EXPERIMENTAL FARM:—In obedience to the recommendation of the State Society, a meeting of those friendly to the establishmet of an Agricultural College and Experimental Farm was held at the Society's Hall on the 9th Feb. Chas. B. Calvert, Esq. President of the Society, in the Chair. The Committee appointed for the purpose—Messrs. J. H. McHenry, Hugh Gelston, and John Merryman, Jr. presented the following report, which was read and adopted:

BALTIMORE, February 9th, 1853.

The Committee to whom was referred the Resolution passed at the quarterly meeting of the Executive Committee of the Md. State Agricultural Society, directing the preparation and submission of a plan by which the proposed Agricultural School and Farm should best be brought to the favorable notice of the community, and the necessary means for its establishment obtained, respectfully report:

That they have given the matter long and careful consideration—that they have weighed the importance of every suggestion made to them, and examined the subject in every light in which it has been presented, and that they unanimously concur in recommending the plan embodied in this report, as that which appears to them best calculated to place the Society upon the most commanding, permanent and useful position, and to offer to all connected with it, the greatest advantages. The propositions which have hitherto come before the Society and the public, have been so vague, that one of the first questions which occupied the attention of your Committee, was—what shall be the connexion between the Md. Agricultural Society and the Farm School? How shall the latter, when purchased and put into operation, be governed?—and shall the vote of the annual subscriber of $3 to the Society, weigh in the election of officers, and especially in the disposition of the property of the Society, equally with that of a contributor of a large sum to the general capital. The discussion of these questions led to the adoption of the principle of stock—and this threatened to lead to the establishment of a distinct body under a new charter, which should co-operate with the Maryland Agricultural Society, but be under the control and government of the officers chosen by the stockholders who should contribute to its foundation. Much reluctance however was felt to propose a separation from the parent Society, and the erection by its side of a new body, with similar interests—and serious apprehension lest it might not be easy to secure future harmony of action between the two.

Your Committee then determined to advise the adoption of the stock system, as a representation of present, and a means of obtaining future capital for the accomplishment of the objects of the Society, and the incorporation of the same in its Constitution.

It appearing doubtful whether the actual charter of the Society would authorize the creation and issue of stock, legal advice was obtained upon that point, and clearly recognized the right of the Society so to divide and represent its capital.

The Constitution of the Society declares that:

"Art. 8.—This Constitution may be altered at the "annual meetings of the Society; but no alteration "shall be made, unless it shall first have been recom- "mended by the Board of Managers, and then sanc- "tioned by the votes of two-thirds of the members "present; provided that not fewer than thirty of "the members are present; but the quorum to trans- "act the ordinary business of the Society shall con- "sist of thirteen members."

Your Committee therefore respectfully suggest that the Board of Managers do recommend for the adoption of the Society at its next annual meeting, the following amendments and alterations to the Constitution:

Art. 3 shall be repealed, and the following substituted:

"The capital of this Society shall be represented by stock, the par value of each share of which shall be $25.00. The President of the Society shall, as soon as it shall be shown to him that 2000 shares, ($50,000) of the stock have been taken, call together by due notice given in the public prints, the subscribers to said shares—and these shall proceed, upon the payment by each subscriber of $5, on account of each share of stock claimed by him, to organize a government that shall supersede the until that time existing government of the Society. In the elections of officers, and in questions involving the increase or alienation of the property of the Society, each share of stock shall entitle the holder thereof to one vote; provided however, that not more than forty shares shall be voted by any one person, in his own right. The balance, or any part of it, due upon each share of stock, may be called in at any time, on a vote representing a majority of the shares at such time subscribed, after at least one month's notice of their intention in the public prints.

"Stockholders, as such, shall be entitled to all the privileges of members of the Society. Any person may become a member of the Society for one year, by the payment in advance of $3, and shall thereby be entitled to enter his stock or implements at the yearly exhibitions, and to enjoy the usual privileges of members during the continuance of the same—to attend and take part in the general meetings of the Society, and vote, except in the cases above reserved. There shall be no life-membership created, but any person now a life member of the Society, shall be entitled at his pleasure to merge his claim in one share of stock."

Art. 6 shall be subject to the revision, alteration, or repeal of the stockholders, at their first meeting, or at any annual meeting, but if not acted on by them shall remain as it now stands.

Art. 8 to be amended, substituting "stockholders" for "members." Also by substituting for the words "than 30 of the members," the words "one-third of the stock."

Your Committee regret that they have been unable to devise any plan by which the establishment of an Agricultural School and Farm may with reasonable prospect of success be more speedily effected. They believe, that without the adoption of the stock principle, it would be extremely difficult, perhaps impossible, to obtain the funds required to carry out the objects of the Society—and they hope by means of it to found and gradually build up one of the most important, useful and popular institutions in the State.

The necessity of an amendment to the Charter of the Society, so as to embrace the objects contemplated in the report as adopted, was then discussed by Messrs. McHenry, Gelston, Glenn, Calvert, and others. Mr. McHenry then offered the following resolution, which was read and adopted, and Messrs. J. H. McHenry and W. W. Glenn were appointed a committee to prepare a supplement to the Charter, and present the same to the Legislature for its adoption:

*Resolved*, That a Committee be appointed to memorialize the Legislature for a supplement to the Charter of the Maryland State Agricultural Society, granting expressly to the said Society the privilege of issuing not exceeding 10,000 shares of stock, at the par value of $25,00 each share—and declaring, that on the acceptance of the supplement by the present Maryland Agricultural Society, the stockholders shall thereafter constitute the sole members of the Society, and shall vote according to their interest in all questions involving the purchase, alienation, or encumbrance of the real estate belonging at any time to the same.

Mr. Hugh Gelston offered the following resolution, which was read and concurred in, and Messrs. Gelston and Sands were appointed the Committee.

*Resolved*, That a committee be appointed to prepare books, in the margin of which shall be inserted the Charter, including the supplement thereto, so soon as the said supplement should become a part of the present Charter of the Maryland State Agricultural Society, in such numbers as they may deem expedient, and to distribute the same, soliciting subscriptions upon the conditions set forth in the aforesaid Charter and supplement.

The meeting then, on motion, adjourned.

## TRANSPLANTING EVER-GREEN TREES.

*Catonsville, Balt. Co., 9th January*, 1854.

*To the Editor of the American Farmer:*

Dear Sir:—I notice in your valuable paper of this month, some information on setting out Evergreens. I have had more extensive practice in planting out Trees than any of my acquaintance, and it gives me great pleasure to see every person making their homes comfortable. Nothing adds to the appearance of a place more than a tasteful selection of evergreens judiciously arranged. In 1829 I was for the first time employed in laying out and planting large plantations, and subsequently have had constant practice. My experience induces me freely to say with all the force of truth, and as a man, that any Tree may be taken up and planted so that it will grow. Great care is needed in taking up Evergreens; and the best season is the *last two weeks in March*, and the *first* two in *April*. In taking up Evergreens dig clean around the tree, without touching the roots, then dig a hole upon one side of the tree and let it fall into it; then if the ball be too big, break it off, so that it will not be apt to fall all off, and if you have far to carry it, then have each ball confined with a piece of mat or coarse packing cloth; and plant it as soon as possible in good rich soil, but do not pack the soil around them with your feet, as you would any other tree; but tie them up to a suitable stake, and throw two buckets of water around each tree, which will settle the soil about its tender roots; afterwards it will take care of itself.

No one need say that it is not worth while to plant hemlock or cedars, they won't grow. If properly planted they will grow as free as any trees in our forests—and the Hemlock is one of our best evergreens, and is of rapid growth. If the above remarks be of any interest to your readers, they are with pleasure placed at your disposal.

Respectfully yours, John Priest.

P. S.—I forgot to say, that a tree of any kind ought *never* to be moved after it begins to grow: if it cannot be removed before, let it remain to the following season.

## Atkins' Self-Raking Reaper.

We publish by request of Mr. Wright, the following article, tho' we must candidly say, that we doubt the practicability of carrying into effect the plan suggested by him—Our experience has shown the difficulty of obtaining the services of committeemen for a single day on trials of machinery, and it would require a degree of public spirit rarely to be met with, for any number of gentlemen to devote as much time as Mr. W's. project calls for, at such a season of the year—and no security can be offered, that their labors will not be in vain, and their decisions as unsatisfactory as those which have preceded them.

We have already, some months ago, through an able correspondent, presented to our readers a description and favorable notice of Atkins' Self Raking Reaper, to which we refer all persons interested, to Mr. Wright's advertisement on another page, and Mr. Stabler's communication in the present number.

Chicago, Feb. 7, 1854.

*To the Editor of the American Farmer—*

Dear Sir:—As a manufacturer, I desire to enter my protest against any more petty trials of reapers. They cost a great deal and amount to nothing. The decision at one trial is reversed the next week at another, perhaps with the same machines, and often the competitors can show their defeat was owing to some extraneous circumstance, as not having a suitable team, bad driving, or unfortunate management in some way.

A reaper trial is not like a horse-race, where the sole object is to beat, regardless of everything except the coming out ahead; it is, or ought to be, to ascertain surely which is the best machine, and not so much to benefit the owner, as the farmers, who wish to know what kind to buy.

How absurd is it for any set of men—I care not how great their experience and judgment—to

take from three to a dozen reapers, perhaps all of acknowledged merit, and by the cutting of two acres each, as was done at the Wooster, Ohio, trial, where mine was defeated: or even by cutting five or six acres as at the Richmond, Ind. trial where mine was victor, decide positively and absolutely that one reaper is better than all others.

Such a trial might show whether a reaper would work or not, but to judge between rival reapers, of which there are over twenty of established reputation, each having its points of excellence, a long and thorough trial must be requisite, to see how they work in different kinds of grain, and under varied circumstances, and how they wear. A trial to be decisive should go through an entire harvest. One, too, that was thorough and reliable, would be equally available in one State as another. They are also expensive to all concerned. I would therefore propose a general trial on something like the following plan:

Let several State Agricultural Societies unite, each appropriating $200 to $500, and appointing one or two committee-men, in whose experience, judgment and fairness, entire confidence could be placed. Let the committee make their arrangements early as possible, adopt their rules, and appoint time and place of first meeting. They might begin South and proceeding North continue the trial for weeks if necessary, leaving out one machine after another as its inferiority became manifest.

The committee should have all their expenses paid, and perhaps compensation besides; and the cost of removing reapers from place to place might also be borne by the committee, in order to enable every builder to come into the trial; and for this reason I would not require any entrance fee, though some of the larger builders would doubtless be willing to contribute to the general fund. If five or more societies can be got to unite in such a trial, I will contribute $200 to $500, or as much as any other builder.

The surplus funds should be divided to the best machines, say half to the first, one-third to the second, and one-sixth to the third, to be paid in plate or money as might be desired by the winner.

To save time and expedite arrangements, I would suggest to parties interested to correspond with Col. B. P. Johnson, *Secretary N. Y. State Agricultural Society, Albany, N. Y.* I have not communicated with him, but am quite sure his interest in agricultural matters will cause him to bear the labors with cheerfulnes.

Yours respectfully, J. S. WRIGHT.

## THE RESCUE GRASS, OR CERATOCHLOA BREVIARISTATA

*To the Editor of the American Farmer.*

Dear Sir:—The publication of my letter to you of the 25th of November last, upon the merits of my incomparable winter grass, seems to have made some impression, if I were to judge from the many letters received since. I am not surprised at this, however, as there are a good many excellent reasons for it. I was told the other day by one of Georgia's eminent and practical men, that my grass has been sought for for the last fifty years, and never before found. And I would note an expression in a letter from C. B. Calvert, Esq., in which he says, "it is absolutely necessary for us, (the farmers and planters of Maryland,) to change our whole system, and cultivate more grass, and less grain." The growing spirit of agricultural improvement—the sincere desire to reclaim what were once rich and profitable plantations—the rapidly increasing demand, and high prices paid for beef, mutton, kid, pork, veal, lamb and poultry in all of the large cities and towns—the fixed and sensible determination now so manifest in our people, "to stick to the old plantation, and the young folks at home," admonish me that the publication of the valuable qualities of my grass, should create, as it ought, a very general interest. If what I am going to say, could reach every ear in the South, I would cease to sigh, when I look out over the innumerable fields once rich and lovely, now abandoned, desolate and lonely. If my voice could reach every farmer South of Mason & Dixon, I would rejoice—I would say, "behold, I bring you good news, glad tidings of great joy," for the great discovery of the age is made, and our section shall come to be the Eden of the world. This might appear wild, and such a result an utter impossibility, but if it was possible for every man to see my grass as it now is (and it is nothing yet to what it will be) this result would be to each and every one of them as clear as a sunbeam. My grass followed with the no less valuable pea, (Southern and Oregon) will reclaim in a few years every old worn out field in her borders, and make every one of them produce as well, yes better, than they ever did, and that for ages on ages to come. My grass and pea will not only do this, but they will pay us richly all the time it takes to refertilize them. How is this done? I will show how it is done. I am aware that your readers would much prefer to have the plan, than to hear that there is such an one. Well then, we will select a field, say 50 acres—we will take one which is the poorest of the poor, robbed, butchered and abandoned, (and their name is legion)—we will put a good fence around it, and in the month of March we will break it up as well as it can be done—filling up the gullies with bushes, with logs on top. In April we will open deep furrows 3 feet apart, and drill guano, stable manure, or rotted cotton seed, (either will do) in each, then sow (in your State) Oregon peas, and also, along with them, the seeds of my *Rescue Grass*, quite thick in each row, and cover lightly. The peas will come up, but the grass seeds will lie there. We will give the peas the necessary workings, and in the fall we will either save the peas for food (and there is none richer) or we will turn in the fattening hogs. (In Georgia, peas mainly fatten pork, and the Oregon pea will do the same thing for Virginia.) We will let the pea vines and leaves lie to rot on the ground—they return an excellent coat of vegetable manure to the field. Now, let us see what the pea has done for us:—1st. They have completely prevented rains from washing the ground—2d. They have given the field the beneficial influence of shade, having protected the surface from the baking summer's sun—3d. They have mainly helped to fatten the pork—4th. They have drawn (by their roots) and extracted (by their leaves) those alimentary ingredients and fructifying gases, and returned them liberally back to the soil of which our excessive tillage had previously robbed it—and 5th. They have given to the field a large coat of vegetable mould, nature's best and most lasting manure. We now see the Rescue Grass seed coming up about the 1st of September, and we will give them a working or so, before November, by

which time the grass is ready to receive our stock of horses, mules, cattle, sheep, goats, hogs and poultry—yes, the whole of them, and we will let them have it, for of all things in the world they like it the best, and it will keep them all fat throughout the winter, "while bleak winds are howling on the hills." It is now June, and we will turn off the stock, and let the grass go to seed. Now we cut it for hay, and it will again grow up, from its heads and seeds, ready to give us more hay—but we are reclaiming the field, and have not time, for the peas must be sown about this time, so we will let the seeds get ripe—we will strip the heads by hand to gather as much seed as we may want for other fields (which we are refertilizing in the same way.) The grass having shed out its remaining seed, we proceed to sow peas again, either in drills, in the middles, between the rows, or broadcast them on the standing grass, and turn under all, grass, peas, and seeds.

Now let us see what the Rescue has done for us—1st. It has completely saved this field from the heavy washing rains of winter and spring—2d. It has kept all the stock fat from November to June—3d. It has thereby saved our corn and fodder, which we can use lavishly during plough time—4th. It has enabled our good wives to have an abundance of rich milk, rich cream, and the sweetest yellow butter for their tables—5th. It has put it in our power to have fat, tender beef, mutton, kid, pork, veal, lamb, and good fowl, whenever we choose, and all over that, to sell at very high prices for cash—and 6th. It has returned an abundant coat of manure to the ground. We do not mention the hay, as we are reclaiming the field, though we can cut it a time or two, and then turn it under. Now, the peas are up again, and they look as if somebody had piled guano or something else in the furrows—"certainly the grass and pea vines don't make them grow with such a rush?" some will say—yes, sir; but this is nothing to what you will yet see that old worn out field do when I am done with it; we will just follow up this lick until the 3d or 4th year. Do you not see, sir, how much better it will be? certainly you do, for any man with half an eye can see it. Now, my dear sir, I ask you candidly, can guano do this? can you show to the farmers and planters of Maryland and Virginia any other plan that is as cheap, as simple, as easy, as sure, and which will pay all the time as well? This plan is not a theoretical one. It is the result of actual experiment, the only test that is worth a cent. My grass is now over 12 inches high, and it is just 10 weeks since the seeds came up. It is perfectly beautiful, green and nutritious. It has stood the unusually severe freezes, sleets and snows, and heavy rains we have had (here,) this winter, without the least injury, while barley, wheat, oats and rye, have all been cut down. My grass is the wonder and admiration of every one who has seen it, and I can, (if necessary) publish the testimony of hundreds of our best men here, who will verify my description of it. It is indeed, at this time, glorious to behold, but it is nothing to what it will be by spring. I claim for my grass the following qualities, every one of which is strictly true, and I take this opportunity to say to all who desire to get seed of it, (and every body should) to write to me, post-paid, when I will register their names in my book, (where I now already have a large list) and as soon as my seeds are gathered, I will send them as I may be instructed. My address is, Columbus, Georgia.

1st. It has the largest grain of any known species of grass, being nearly as large as wheat.

2d. It will grow (on very rich ground) from three to four feet high.

3d. It is never injured by cold—no freeze hurts it.

4th. It is never troubled by insects of any kind.

5th It is never injured or retarded in growing by heavy rains, overflows or ordinary drought.

6th. It grows as fast as Millet or Lucerne.

7th. It is as nutritious as Barley, and stock are as fond of it as they are of that.

8th. It will keep horses, mules, cattle, sheep, hogs, and poultry fat, throughout the winter and spring, from November to June.

9th. It will then (the stock being withdrawn, and the ground being rich) yield from four to six tons of excellent hay per acre.

10th. It saves corn and fodder, being fed away to stock during the winter and spring.

11th. It completely protects fields from washing rains.

12th. It enables farmers to have an abundance of rich milk, cream and butter, with fat beef, mutton, kid, pork, turkey, and chicken for their table.

13th. It will (if followed with our cornfield pea) give to farmers the cheapest, the surest, and the most paying plan to reclaim worn out fields, and fertilize those not yet so, which the ingenuity of man can devise.

14th. It will sow its own seeds after the first time, without expense or trouble, thereby reproducing itself through its seeds on the same ground ad infinitum.

15th. It does not spread or take possession of a field, so as to be difficult to get rid of, but can be effectually destroyed at any stage before the seed ripen and fall out, by being plowed up, or under.

This grass having the above enumerated properties will be found by all who cultivate it, far superior to any other species ever introduced, or which can be introduced, for the climate and soil of the South. I shall be prepared by July next, to furnish seed of this valuable grass to all who desire to cultivate it. My price is $5 per peck, which is as much as is necessary to begin with; it being distinctly understood that in every instance where the party is not satisfied (after giving it a fair trial) the price shall be returned.

Your obedient servant,

B. V. IVERSON.

From the interest manifested in regard to the grass of Mr. Iverson, we felt it our duty to endeavor to get such additional information as might be deemed reliable, and took the liberty of addressing notes to subscribers to our journal at Columbus, from one of which we have received the following:

COLUMBUS, GEO., Feb. 2. 1854.

Dear Sir.—Since my reply to your letter containing inquiries as to Mr. Iverson's Grass, I have at his request examined that portion of it which he has seeded in this neighborhood, and now from my own observation I am able to make the following report:

Our winter has been a very remarkable one, with sudden alternations of pleasant, growing weather, to extreme cold and freezing, and consequently very unfavorable to the growth of any vegetation, yet while cabages, barley, and even rye itself, present a yellow and sickly appearance, this grass is green and luxuriant, and averages 18 inches in

height over the bed on which it is planted. The drills are about 20 inches apart, yet you cannot see the ground between them; the land upon which it is sown is in my opinion, very good, and I suppose that on thinner land the growth would not be so rank; but be that as it may, I have no doubt the grass merits all the commendation bestowed upon it by Mr. Iverson.

It will afford me much pleasure to give you any additional information that you may desire.

I am, sir, yours, &c.,

JOHN A. JONES.

We will likewise give an extract from the notes of the editor of the "American Cotton Planter," who has recently visited Mr. Iverson, at Columbus—He says:—

"But we did not expect to say so much about our Columbus visit at this sitting, and yet we have said nothing about Mr. Iverson's "Rescue Grass." At the risk however of being tedious, we must say our opinion about this Grass. Our people are bringing fine stock into Alabama, and they must very soon be more interested in Grass than simply to kill it for Cotton to grow.

"We spent an hour with Mr. Iverson, and he told us all about this Grass, that he knew from 3 to 4 years experience, which is the true knowledge for the Agriculturist, with science at the helm. This is emphatically a Winter Grass—annual, dying down and dropping its seed in July, by which the land is re-seeded. The seed are much larger than any other Grass seed, bearded and horn like in their position on the head, hence the Botanic name of the Grass—*Ceratochloa Brevistata*.* I was in it and through it, standing in the drill and broadcast. It is now standing from 6 to 10 inches high, tender and sweet, with a soft fibrous root, not unlike oats. My opinion is, from a critical examination of it, that its introduction here at this time, is a decided point gained for improved Agriculture in the planting States.

"It is perhaps not superior to some others of the Grasses. Mr. Iverson assured me that he did not consider it superior to Barley—I judged it equal to Barley and about equal to my "*South American Evergreen Pasture Grass*," which I have found superior, for 12 years, to any thing I have met or seen in any country, except Red Clover. My Grass differs from Mr. Iverson's, in that it is perennial. The advantages of these Grasses to the country consist in their adaptedness to those localities where Red Clover, for instance, will not grow kindly. But when our State shall be well set with Red Clover and these Grasses, and stocked with Cashmere-Goats, Devons and Red-Durhams, Cotswold Sheep, Paulo-Marino's, Saxons, and Saxon-Merino's,—then our people will appreciate an effort to improve our Agriculture, to improve our stock, our orchards and our vineyards. The Cotton Planter is operating for that glorious day."

Mr. Iverson, in another communication, says that there was a mistake, either ours or his own, in the number of acres sown, as stated in our first notice. He had directed his manager to drill in 100 acres, and he had seed enough to do it, but he broadcasted them, very thickly, and put but 40 acres in grass—He says he is satisfied that his grass will suit our climate and soil better than that of Georgia—and asks: "will you act as agent for me, at Baltimore? I have many orders for seed to be sent there,"—and having also received a number of applications from friends in Maryland and Virginia, to obtain some of the seed for them, we have complied with the request of Mr. Iverson, to receive and distribute it when it reaches us.

Under date of 12th February, Mr. Iverson again writes us that he intends to avail of the opportunity of sending in a few days a bunch of the grass, by his brother, the Hon. Alfred Iverson, who was about to leave home for Washington to take his seat in the U. S. Senate, to which he has been elected by the legislature of Georgia—and adds:—

"Now if I had sown the seeds in June or July, the grass would now have been 24 inches high. The seed should be planted directly after the seeds get ripe, as it makes them come up early in Sept. and gives the grass time by November to be well set and tillered before cold weather comes on. You may think me enthusiastic about my grass, but really I am not half as much so as the hundreds who see it. I knew, 4 years ago, the great value (to the South) which this grass possessed, and hence I am not influenced as much in that way as you might suppose. No one need be apprehensive that it will prove a failure. It will realize *all I say of it*, and indeed more. But when you receive the identical "Rescue," you must plant it in a box. It will live and make you some seed. I have your kind letter, and am very glad you consent to act as agent for me at Baltimore."

*The English of which is, short awn, horn grass.

## APPLES.

As many persons may design setting out young orchards this spring, we deem it our duty to copy from *J. J. Thomas'* "American *Fruit Culturist*," the following paragraph. Mr. Thomas is one of the most enlightened pomologists in the country, and being a truthful gentleman, and a Northern man, must be presumed to speak impartially.

"CHANGES WROUGHT BY CLIMATE AND SOIL."

"This subject has been treated as applied to fruits generally, in a former part of this work; a few brief remarks on the variations in the apple, may be interesting."

"The *winter* apples of the Northern States, when cultivated further South, are changed to autumn apples; and, as far South as Georgia, some of our good keepers ripen nearly by the end of summer. The *Baldwin* and *Rhode Island Greening* at Cincinnati, and at St. Louis, cease to be winter fruits. There are few of the Northern apples which succeed well as keepers, as far South as Carolina. This is owing to the long Southern summers. It has been found that varieties originated in the Southern States are generally best adapted to the climate of that region."

"Some varieties are greatly influenced by a change of climate, and others but slightly. The Ruston Pippin, so excellent at Montreal, is of little value a few degrees further South. The Rhode Island Greening, and the Roxbury Russet, on suitable soils throughout New York and New England, present the same characteristics of flavor and appearance; the Baldwin, so fine at the East, generally deteriorates in Northern Ohio, and the Belmont, which has been pronounced the most valuable of all apples at Cleveland, is unworthy of cultivation at Cincinnati. These changes in the latter instance may perhaps be ascribed to a difference in soil, and the application of special manures, as

lime, potash, &c. on such unfavorable soils, has improved the quality."

We give the following analysis of the apple to show its inorganic constituents, because from it may be deduced the kind of mineral substances that should be applied to land on which young orchards may be set out, as well as those that should be applied to old ones:

| | |
|---|---|
| Silica, | 1.750 |
| Phosphate of iron, | 2..27 |
| Phosphoric acid, | 14 083 |
| Lime, | 4.956 |
| Magnesia, | 1.786 |
| Potash, | 42.016 |
| Soda, | 19.295 |
| Chlorine, | 2.092 |
| Sulphuric acid, | 6.656 |
| Organic matter thrown down by Nitrate of Soda, | 5.139 |
| | 100. |

Now all these substances may be applied to an acre of land by giving it a top-dressing of

100 bushels of ashes,
4 bushels of bone dust,
50 bushels of lime,
4 bushels of salt, and
1 bushel of plaster,

The whole to be broadcasted and harrowed in.—The ashes and lime will not require repeating for 14 years. Every 4 years it would be well to repeat the dose of *bone-dust*, *salt*, and plaster, which would be the better of being formed into compost with woods-mould and well rotted manure, say 3 loads of the former, and 1 of the latter—the compost to remain in bulk three weeks, and then be ploughed in 2 or 3 inches deep at farthest, the ground then to be harrowed and rolled.

The proportion of bone dust named, may be substituted by 500 pounds of American Phosphate of lime—so may the well rotted dung be substituted by 100 lbs. of Peruvian guano.

Land on which an orchard may be set out should *not be wet*, and should be ploughed deeply, and subsoiled also.—*Ed. Amer. Farmer.*

### Allen's Plan of an Ice House.

La Grange, N. C. Feb. 1st, 1854.

*To the Editor of the American Farmer—*

Sir:—In the "Farmer" of September last, I noticed a plan for an ice house, above ground: taken from "Allen's Rural Architecture." It was my intention to have built one after that plan, but I heard so much doubt expressed, (by persons who seemed acquainted with the subject) as to whether such a house would effectually preserve ice in a climate as warm as ours, in N. Carolina, that I concluded to wait until I could learn something more about it. With a view to obtaining practical information, I submit the following inquires:

1st. Will an Ice house constructed "above-ground" upon "Allen's plan," preserve ice during the summer, as far as N. C.

2nd. Have any of your subscribers made the experiment; if they have, I would be g ad to learn with what success. R. H. G.

Any information upon this subject, would be thankfully received by us.—*Ed. Am. Far.*

Fertilizers.—In our advertising pages this No. Fertilizers of every description are offered to the attention of the farmers and planters.

## WORK IN THE GARDEN.

### MARCH.

It would be useless for us to attempt to point out any particular day as the one on which the operations of garden culture should commence in the Middle or Eastern States; but as our journal has a wide-spread circulation *South*, it is but proper that we should point out the time when work should commence in that direction,—and we know not how we can better make an approximation to the period, when such labors in that, as well as in other quarters, should begin, than by saying, that so soon as the frost is out of the ground, and the earth sufficiently dry to be well and judiciously worked, is *the time* when these operations should claim attention, in the open ground. As for *hot-bed* culture, that can be carried on any where, and at any time.

Attention to farm and plantation gardens, it is admitted on all hands, have, of late years, received too little care from their owners. There are honorable exceptions to this too well grounded reproach; but these exceptions, praiseworthy and laudable as they are, serve but to reflect the more disadvantageously upon the many, who, by their neglect have rendered themselves amenable to this rebuke; for *certes*, every owner of a farm, or plantation, owes it to himself, to his family, to his immediate friends, and to the community, to provide himself with a well appointed and well cultivated garden—to provide himself with such a garden as shall contain not only every vegetable used, in a mansion where generous and elegant hospitality abounds, but to such a one as will furnish in abundance all the luxuries both of vegetables and fruits, comprehended in an enlarged list; nor should it fail to be adorned with choice shrubbery and flowers.

#### Sowing Seeds of various kinds.

So soon as the frost is is out of the ground, select a part of your garden border facing the South, manure it well, spade it up, rake until perfectly fine, then divide it into compartments, and sow the following kinds of seeds:—Early Cabbage of different sorts, Cauliflower, Broccoli, Tomato, Egg-plants, and Lettuce; rake the seed in lightly, and pat down the earth with the back of a shovel or spade, or place a board on it and tread on it.

If you apprehend danger from returning frost, place pine or cedar brush on it, which you will let remain until the weather gets settled.

#### Asparagus.

If you design forming a new bed of asparagus, prepare a plot on your border, and sow seed in drills 8 or 10 inches asunder.

#### Green Peas.

Plant peas as soon as the earth can be worked advantageously. Repeat putting in a few rows every few weeks.

#### Beans.

As soon as the weather becomes settled, put in a few rows of Beans, and contrive to do so every two or three weeks.

#### Lettuce.

If you have lettuce plants to set out, prepare a bed and set them out to head.

#### Radishes.

Radish seed may be sown as soon as the frost is out of the ground.

### Early Turnips,

As soon as the weather becomes settled manure a bed, dig in the manure, and sow some *Flat Dutch* Turnip seed. After sowing and lightly rolling in the seed, give the bed a top-dressing of a mixture of 4 parts ashes, 1 of plaster, and 1 of salt; then pat down the ground with the back of a shovel.

### Onions.

Manure a bed with well rotted manure, dig the manure in, rake fine, and drill in the onion seed 1 foot apart, and as thin in the drills as you can.—Then top-dress with ashes and plaster.

### Celery.

On a border with a Southern exposure prepare a plot by manuring, digging and raking, and sow celery seed to grow plants for an early crop.

### Borecole or Curled Kale.

Towards the latter part of this month sow seed for a fall crop.

### Early Potatoes.

Put these in as early as the frost is out of the ground. Treat them as advised in the "work on the farm."

### Horse Radish.

Set out a bed of this excellent condimental root.

### Rhubarb or Pie Plant.

Early this month plant out a few dozen plants of this excellent vegetable.

### Garden Fruit Trees.

Cut off any dead limbs that may be on your garden fruit trees—do it nicely, make the wound smooth, and dress it with a mixture formed of equal parts of beeswax, rosin, and turpentine, to be melted over a slow fire, and put on warm. Dig in a mixture of well rotted manure around your trees, rake the ground, and give the ground as far as the limbs extend, a compost composed of 4 parts ashes, 1 part plaster, 1 part salt, and 1 part bone earth.

### Gooseberries, Currants and Raspberries.

Trim up these, and dig in well rotted manure around the roots, rake the ground, and give them a free dusting with equal parts of ashes and plaster.

### Strawberries.

If not done last fall, dress your beds, dig in some manure, and spread tan or straw in the alleys. Be careful not to let them suffer for water in dry weather, and be as careful not to touch the blossoms while watering.

## A TABLE OF MEASURES,

| | | | | *Cubic Inches.* |
|---|---|---|---|---|
| A box | 24 by 16 by 28 inches | will | contain 1 barrel or | 10752 |
| " | 24 by 16 by 14 " | " | " ½ barrel or | 5376 |
| " | 16 by 16.8 by 8 " | " | " 1 bushel or | 2150.4 |
| " | 12 by 11.2 by 8 " | " | " ¾ bushel or | 1075.2 |
| " | 8 by 8.4 by 8 " | " | " 1 peck or | 537.6 |
| " | 8 by 8 by 4.2 " | " | " 1 gallon or | 268.8 |
| " | 8 by 8 by 2.1 " | " | " ½ gallon or | 134 4 |
| " | 4 by 4 by 4 2 " | " | " 1 quart or | 67.2 |
| " | 4 by 4 by 2.1 " | " | " 1 pint or | 33.6 |

### How to find the Contents of a Room.

A cubic foot contains 1728 cubic inches, and a bushel contains 2150.4 cubic inches; therefore a cubic foot is $\frac{1728}{2150.4}$ of a bushel, which reduced to a decimal fraction, is .8 or 8-10 of a bushel.

Now in order to find how much a room will contain, multiply the length, width and height in feet together, then multiply by 8 and divide by 10, the answer will be in bushels and tenths of a bushel; if you divide by 10 again, it will give the number of barrels of corn in the ear the room will contain. E.

## FLORAL DEPARTMENT.

**Prepared by John Feast, Florist, 279 Lexington st. for the American Farmer.**

The season has now returned in which much preparation is necessary, both in and out of doors, for the pruning of all kinds of Trees, Shrubs, Vines, and Creepers, and the training of all such as require it, which is best to be done early, before they make any growth; if left too late, they never do as well afterwards, or look so neat if allowed to grow much before training. After pruning and cleaning up, have the borders attended to, by covering with fresh mould and decomposed manure mixed together; fresh soil is more essential than so much manure, especially if the borders have been standing some time; they naturally are worn out by manure, and are calculated to grow only certain things: whereas, if a portion is taken out, and good top rotted turf and a little manure or leaf soil, well mixed together, put in its place, will seldom fail to bring most plants to perfection. The failure of seeds many times may be attributed to the borders not being in a proper state to put them in, and sometimes having only two or three inches deep of soil, especially in our town gardens. Have your borders dug down two feet, and fill up as above, if you can afford it—then you will have pleasure in seeing things thrive.

Commence planting out every thing that is hardy, and laying out walks with box edging; also clip them to a proper shape, as a neat edging of any kind is an ornament to any garden—never allow them to grow over nine inches, and of a proper thickness; have them reset when too large, as they exhaust the ground too much. Prepare hotbeds for the sowing of seeds; and young plants to be forwarded for early flowering, should be planted out in the borders, when the weather will permit.

*Dahlias.*—Divide the roots, or increase in any way such as are wanted, for a fresh stock—repot them in separate pots ready for removal at any time.

*Camellias* will begin to grow after the main bloom is over; give them frequent syringings, with clear water, and occasionally a Guano water at the root.

*Azaleas* in bloom must have plenty of water—be careful not to syringe or wet over the flowers, as it spoils them, and they fall off much sooner—inarch some of the dwarf growing ones on good stocks; when well grown they are great ornaments in a greenhouse when in bloom.

*Geraniums* will begin to grow rapidly at this time, and soon show their appearance of buds; keep them well syringed over their foliage, and occasionally fumigate to keep down the insects that infest them—have them as near to the glass as possible; they flower much finer, and are not so much drawn up, which destroys the appearance of all plants.

Tender bulbous roots will now begin to bloom—set them as near the glass as possible—the foliage will be finer, and they will flower stronger; they require to be well watered at the root when in bloom, but not over the foliage, as dampness causes the foliage to decay, and injures both the bloom and bulb, as it cannot mature so as to ensure a strong bloom the following season.

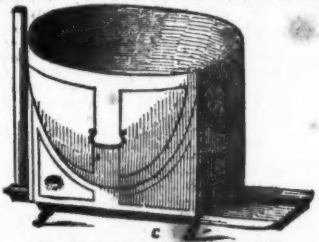
*Heaths, Epacrises, Diosmas,* and all the finer hardy cape plants, will now require to be carefully watered; give them a plenty, so as to moisten the whole in the pot; if they have good and plenty of drainage, they are seldom injured by too much water—pinch off the tops to make them branch and form nice

bushy plants; propagate as soon as the wood is hard enough, and repot in larger pots those needing removal.

Remove all hardy evergreens, and uncover such as have been protected with straw or mats, if the weather will permit—plant out all hardy flowering shrubs and roses, or remove those out all winter, but omit till next month, such as have been in doors; if they have made any growth, they are liable to be injured with the weather, if cold—it is always better to wait till the inclemency of the weather is over.

*Grass Lawns*, top dress with fresh loam and ashes mixed; this is much better than manure, and cleans them from all weeds that spread and injure the grass, as clover, plantain, &c.


**The Best Cauldron Furnace or Agricultural Boiler in use.—For Wood or Coal.**



MACGREGOR'S PATENT

CAULDRON FURNACES,

OR

AGRICULTURAL BOILER.

THE SUBSCRIBERS have made arrangements with JAMES MACGREGOR, Jr., for the exclusive privilege of Manufacturing and selling his *Patent Cauldron Furnaces* for the entire Southern country.

These Cauldron Furnaces are so constructed that they take less than one-half the fuel (either wood or coal,) to accomplish the same amount of work, than any other article for a like purpose, either set in Iron or Brick.

They boil equally as quick in front as back, consequently they are admirably suited for all purposes which require an equal and governable heat. The appearance is of the most approved style, and having been in use and thoroughly tested for the last six years, we can warrant them with certainty.

Farmers wishing to have boiling going on during the night, so as to have potatoes and other articles ready for use in the morning, can do so with this Cauldron Furnace to their entire satisfaction, and thereby effect a saving of much time and trouble over any other article of the like purpose ever before offered to the public. This is done by means of a damper at the bottom of the pipe, by drawing which after the usual amount of fuel has been ignited, the liquid will continue to boil for from three to five hours without any further attention from the operator. Any person purchasing any of the above article can try it for thirty days, and if in his opinion it does not fully sustain the above recommendations, he is at liberty to return the same, free from any deductions; and the money will be refunded in full. For sale, wholesale and retail, by

ROBBINS & BIBB,
Baltimore Stove House,
39 & 41 Light Street, below Lombard.

The following are our agents of whom the above may be had.

Fitzhugh Coyle, Washington, D. C.—E. M. Linthicum, & Co., Georgetown, D. C.—R. S. Huck & Co., Alexandria, Va.—Wm. Palmer, Richmond, Va.—Rowlett, Hardy & Co., Petersburg, Va.—A. Nueton & Son, Winchester, Va.—D. G. Blair, Cumberland, Va.—Hill Bradley, Fredericksburg, Va. —Borum & Fisher, Norfolk, Va. Nov.1

SUFFOLK AND Essex Pigs.

PURE BRED, for Sale by EBEN WIGHT, Boston, or B. F. KEYES, Dedham, Mass. ag 1-tf

**BONE DUST AND POUDRETTE.**

WARRANTED free from any mixture—no Glue extracted, or any Chemicals used, leaving the Bone Dust in its natural or pure state, weighing from 55 to 60 lbs. per bushel, at 50 cts. per bushel, in December, January and February—the balance of the year at 55 cents.

The Poudrette is as good as can be made, and for sale low.

☞ REFERENCE.—D. M. Perine; G. V. Lurman; J. Tyson Jr., and J. W. Randolph, Baltimore County; Wm. B. Stephenson, and Lloyd Norris, of Harford County; William Baker Dorsey, and Dr. Allen Thomas, of Howard County; C. Stabler and William S. Bond, Montgomery County; A. N. Bernard, and Maj. Lee, Va.

☞ Orders left at the American Farmer office will be attended to. Jan. 1 THOMAS BAYNES.

JACKS FOR SALE.—The subscriber has for sale three Jacks, one an imported Maltese, very fine, nearly 15 hands high—the others are two and three years old—bid fair to be fine animals when they obtain their growth, and have proved themselves. Apply to S. SANDS. jan 1

**Devons For Sale.**

I HAVE for sale two Yearling BULLS, one Bull Calf, Heifers, and Heifer Calves—the get of my Bull bought of Mr. George Patterson, out of Cows bought of Messrs. Joseph E. & Stephen Bailey. Part of these cattle took premiums at the Montgomery and Frederick Co. Fairs. I am permitted to refer those wishing to purchase, to *C. B. Calvert*, Esq. Washington City, President of the Maryland Agricultural Society.

Also 6 pair Devon Steers from 1 to 3 years old.

S. T. STONESTREET,
jan 1-3t Rockville, Montgomery Co. Md.

**McCONKEY, PARR & CO.**

**Grocers and Commission Merchants,**

*Nos.* 87 *and* 89, *Bowly's Wharf, Balt.*

OFFER their services to Farmers and others, for the disposal of GRAIN and other produce. Having devoted may years to the business, they flatter themselves their long experience and extensive facilities enable them to assure the highest going market prices, and entire satisfaction in the sales. Personal attention is given to the delivery and weighing of Wheat consigned to their care. Charge for commision, one cent per bushel.

☞ They would call the attention of Farmers to their large and extensive stock of GROCERIES, WINES and LIQUORS, and would solicit an examination before purchasing elsewhere.

☞ Particular attention given to the purchase of *Agricultural Implements, Seeds, Guano, &c.* je 1-tf.

**DINSMORE & KYLE,**

**GROCERS & COMMISSION MERCHANTS,**

*No.* 156 *Pratt Street Wharf, Balt.*

OFFER their services to the Agricultural community for the sale of GRAIN, and other Produce. Strict attention will be paid to the weighing of Grain. They will also purchase Guano, and other manures for a moderate commission.

They invite attention to their stock of GROCERIES, LIQUORS & WINES, (many of the latter, very old, and of rare qualities,) all of which will be sold on pleasing terms.

To any business entrusted to them, they promise their best efforts. Feb. 1-1 yr.

**GUANO AGENCY.**

IN consequence of heavy advance in the rate of Freight and other expenses, the Peruvian Government has advanced the price of No. 1 Guano to $50.20 per ton of 2240 lbs—at which rate orders will be filled at a charge of 1 per cent. commission, purchasing and forwarding. As the Agent will not sell less than 50 Tons, a uniform charge of $1 per ton will be made for all smaller quantities. When taken from the vessel or warehouse of the agent a saving of drayage can be made.

MEXICAN GUANO and other fertilizers purchased, an Seeds, &c. B. M. RHODES, General Commission Merchant, feb 1 122 W. Lombard street, near Charles.

**Potomac Land For Sale.**

A PORTION of that valuable farm called "*Peckatone*," lying on the Potomac River, opposite Piney Point. This Tract contains 377 acres, of which about 235 acres have been in cultivation; the remainder is in woods, and some of it heavily timbered. A rare opportunity is now offered to any one wishing to engage in the Oyster business; as appertaining to this Tract of land, is part of a creek, celebrated for its superior Oysters, in which at the trifling expense of 8 or 10 cents per bushel, from 10,000 to 20,000 bushs. might be bedded out yearly, which would readily command from 50 cents to $1 per bushel, in the Baltimore and Washington markets.

For particulars address, GEO. F. BROWN, Hague,
Feb. 1-3t. West'd Co., Va.

SEEDS—VEGETABLE, FLOWER, FIELD, FRUIT AND TREE SEEDS.—The subscribers offer, of the growth of the past year, and of the finest possible qualities, their usual very extensive assortment, raised expressly for them in this country, as also in England, Scotland, France, Germany, &c., comprising every tested desirable variety known in the several departments. They would particularly call the attention of gentlemen cultivators, market men, and others, to their superior stocks of Beets, Brocolis, Cabbages, Cauliflowers, Extra Early and Wrinkled Marrow Peas, Lima Beans imported from Peru, Celeries, Cucumbers, improved varieties of Sweet Corn, Lettuces, Melons, Peppers, Radishes, Turnips, &c., &c., of the same superior qualities as have heretofore afforded such universal satisfaction, and which can be recommended with the fullest confidence as unsurpassed.

The list of FLOWER SEEDS, embracing nearly a thousand sorts, includes every approved standard variety, as also every novelty of value introduced in Europe the present season.

AGRICULTURAL SEEDS—In addition to the more common sorts, the best qualities of English and Italian Ray Grasses, Orchard Grass, Sweet Scented Vernal, the Fescues and other Grasses, Lucerne, White Dutch Honeysuckle and other Clovers, supplied in large or small quantities, at low rates.

Carrots, Sugar Beets, Mangel Wurtzel, Parsnips, Ruta Baga and other Turnips for *Field* culture, of the most approved kinds. Honey, Locust, Osage Orange and other seeds for Live Fences, with a large assortment of Tree, Shrub and Evergreen Seeds.

The most approved *Building and Pruning Knives*, of first quality and superior finish; *Brass Green House Syringes; Garden Tools; Bass Mats and Cuba Bast*, for tying and grafting; *Gardening and Botanical Books; Emden Grotts*; all kinds of *Bird Seeds*, &c., &c.

FRUIT AND ORNAMENTAL TREES, EVERGREENS, &c., &c., furnished from the Newark Nursery. This nursery has now 135 acres in the highest state of cultivation, inviting the attention of purchasers, not more by the unequalled extent of the stock than by the extremely vigorous and healthy growth of the Trees, and their admirable adaptation to any variety of soil into which they may be transplanted.

Separate Catalogues furnished free of charge to post paid applicants, and orders by mail immediately attended to. Particular care is given to the careful and requisite packing of Seeds for long voyages. Smaller Vegetable and Flower Seeds can at little expense be expeditiously forwarded by mail to any part of the Union. Retailers supplied at reasonable rates.

J. M. THORBURN & CO., 15 John st., N. Y. mh 1-2t

## SUPER PHOSPHATE.

NO EXPENSE has been spared in the combination of this most fertilizing manure, which contains the nutritive properties of all plants. It is superior to most of the article as offered for sale under their name, and is inferior to none; although sold at a much lower price. It is put up in bags at $40 per ton of some 2000 lbs.—Cash.

Office of the New York Super Phosphate Manufacturing Company, No. 159 West street, New York.

mh 3t VICTOR R. KNOWLES, Agent.

FOR SALE—A Farm of 750 acres, in Western Virginia, in Hampshire Co., well located near the county town, and in the vicinity of the B. and Ohio R. R. 1½ miles from the location of the Alexandria, Loudoun and Hamp. R. R.—there are 17 springs, 325 acres cleared and under good fencing, and a large body well set in grass. It is admirably adapted to grazing. It will be sold a bargan. $10 per acre, on easy terms. Enquire at this office. mh 1-1t

FOR SALE—A Farm and Fishery of nearly 240 acres, 100 cleared, the rest in wood (perhaps 2500 cords on it) two dwelling houses, with the usual out buildings attached to one of them, all in good repair. The water is good, and there is a very promising orchard, and a large nursery of the best varieties of apples, peaches, pears, &c. coming on—the farm is in a fine state of improvement, and land has gone up from $10 to $25 and $35 an acre within 3 or 4 years. It is situated near Denton, Caroline County, Md. A more particular description of the land, and the price, may be had by addressing, post paid, the editor of the American Farmer. mh 1-1t

VALUABLE FARM FOR SALE—In Dinwiddie Co. Va. containing about 350 acres, of which about 80 are heavily timbered, 50 alluvial bottom, a large portion of which is thoroughly reclaimed, and in fine cultivation, and 100 acres well improved and covered. Nearly the whole has a red clay subsoil, and well adapted to wheat and products common to that vicinity—part of the alluvial land is worth $100 per acre—to be properly appreciated, the land must be visited. The buildings are superior and in fine order—there is a valuable grist and saw mill, and unlimited water power. The state of his health and advanced age of the owner, renders it desirable for him to make a disposition of the estate, which will be sold at $20 per acre—and he would also sell with or without the land (the former preferred) the slaves, (70,) and 120 head cattle, 250 hogs, 25 horses and mules, tools, implements, &c. This is one of the most valuable tracts between the mountains and tide water. For further particulars apply to *S. Sands*, office American Farmer. mh 1-1t

FOR SALE.—A fine Ayrshire bull, 2 years and 9 months old. An Ayrshire bull calf 9 months old. Also an improved Alderney bull, 2½ years old. The above animals are from one of the best herds in the country, and are directly descended from stock imported within the last six years. Apply to *S. Sands*, office American Farmer. mh 1-1t*

## ATKINS' SELF-RAKING REAPER.

40 Of these machines were used the last harvest in grain or both, with almost uniformly good success, in nine different States and Canada.

TWENTY-SIX PREMIUMS,

including *Two at the Crystal Palace*, (silver and bronze medals,) were awarded it at the autumn Exhibitions. I am building only 300, which are being rapidly ordered. Mr. Joseph Hall, Rochester, N. Y., will also build a few. ☞ Early orders necessary to insure a reaper.

*Price* at Chicago, $175—$75 Cash with order, note for $50, payable when reaper works successfully, and another for $50, payable 1st December next with interest. Or $160 cash in advance—*Warranted to be a good Self Raking Reaper.*

☞ Agents properly recommended wanted throughout the country. Experienced agents preferred. It is important at this year to have the machines widely scattered.

Descriptive circulars with cuts, and giving impartially the difficulties as well as successes of the reaper, mailed to post-paid applications.

J. S. WRIGHT,

"Prairie Farmer" Warehouse, Chicago, Feb. 1854. mh 1-2t

## AULT'S ENGLISH GARDEN SEEDS.

JUST RECEIVED by Steamships, in New York, our usual supply of first rate English Garden Seeds, all of which are warranted genuine, like those sold in former seasons, further recommendations being needless, we would name in part; Ault's Early Short-top Scarlet Radish, Ault's Early Blood Turnip Beets, Cabbage, Cauliflower, Broccoli, Cucumber, Parsnip, Carriot, Onion, Peas, &c. &c. for sale Wholesale and Retail, by

SAMUEL AULT & SON,

mh 1-2t corner Calvert and Water streets, Balto. Md.

CALCINED BONES.—Thirty tons of Sugar House Calcined bones, in casks containing about 1800 lbs. This valuable fertilizer is offered to the agricultural community at $27 per ton. It is in as fine a state of division as Guano, and by analysis of Professor Higgins, and others, is known to contain a larger per centum of phosphates than the best Mexican Guano. For sale by

N. E. BERRY,

mh 1 1t* No. 150 Lombard st.

FOR SALE—A full bred Chester Boar, about 9 months old, worthy the attention of any one wanting a very superior animal—some Sows of same breed, 6 to 9 months old. Also, a very fine pair of SUSSEX HOGS, about 6 months old, will be received in a few days from Massachusetts. Apply at this office. mh 1-

DEVON BULL "PAYASKI" FOR SALE. This Bull belongs to Chas. Harvey, Esq., of Delaware Co. Pa. who has no further use for him; he considers him one of the best marked bulls (according to Guenon's theory) he has ever seen; he is docile and a sure breeder—his sire was Springfield, grand sire, Mr. Patterson's Eclipse, and he is a half brother of Mr. Holcomb's Eclipse. His dam is Pink, from the original stock presented by Mr. Coke of Holkham, Eng. to the father of Gen. Patterson, Esq.—and is said to have been of the very best milking stock. A more particular description of his pedigree can be furnished. His price deliverable at Balto. is $150. Apply to *S. Sands*, Farmer Office. mh 1-1t

## 1000 BOOK AGENTS WANTED,

TO sell Pictorial and other useful Works for the year 1854.—$1,000 A YEAR. Wanted, in every county of the United States, active and enterprising men, to engage in the sale of some of the best books in the country. To men of good address, possessing a small capital of from $50 to $100, such inducements will be offered as to enable them to make from $3 to $5 a day profit. ☞ The Books published by us are all useful in their character, extremely popular, and command large sales wherever they are offered. ☞ For further particulars, address, (postage paid,)

mh 1 2t ROBT. SEARS, Publisher, 181 William St. N. Y.

## Guano Agency.

WE are prepared to purchase and ship PERUVIAN GUANO, in any quantity not less than one ton. The Guano will always be bought and taken direct from the stock in the warehouses of the Peruvian Agent, in this city, and may therefore be relied on. The terms are $35-25 per ton of 2240 lbs. and $1 commission, payable in cash and Baltimore funds; drayage and any necessary incidental expenses to be added. A saving of drayage can be frequently made when the vessel is to go by water, if the craft can take it from the Agent's warehouses or alongside the ship.

MEXICAN GUANO.—Those wanting Mexican Guano will be furnished at the Importers price, and $1 commission for purchasing and shipping. SAMUEL SANDS,

dec 1-tf Publisher American Farmer, Baltimore.

NEW OXFORDSHIRE BUCKS—I have for sale several fine yearling Bucks, of this breed, which can be well recommended. S. SANDS, mh 1-

N. E. BERRY, COMMISSION MERCHANT, for the sale of *TOBACCO, GRAIN, FLOUR,* and other Produce.
mh 1-1t* 150 Lombard street, Balt.

## Improved Super-Phosphate of Lime.

THE subscriber is now prepared to furnish this admirable manure in any quantity. It is made after a recipe furnished by the Editor of the *Working Farmer*, and it has been used by himself and others with the most marked advantages, for the last five years. The use of bones for manure has been long known to the community, and their importation into England has reached the immense sum of Ten Millions of Dollars per annum. These are chiefly used by chartered companies of the city of London and elsewhere, for the manufacture of Super-phosphate of Lime, made by dissolving bones in Sulphuric Acid—and five bushels of the Super-phosphate of Lime so prepared, has been long known to equal in effect fifty bushels of fine ground bones.

Until the present time, the manufacture of super-phosphate of Lime for sale has not been entered into in this country, and the method by which the article is manufactured now offered by the subscriber, produces an article every way superior to the English super-phosphate; for in addition to the phosphoric acid and sulphuric acid usual in the manufacture of super-phosphate of Lime, it contains such proportion of Peruvian Guano as is found necessary to furnish the other constituents of plants, not contained in bones, and to these is added a liberal quantity of sulphate of ammonia, made from the waste liquor of the gas house.

Arrangements made by the manufacturers, enable them to procure these materials at the cheapest possible rates, and hence they can offer a pure article, composed entirely of phosphate of lime, sulphuric acid, Peruvian Guano, and sulphate of ammonia, at a price equal to that of Peruvian guano, but for the use of the farmer it is of quite double its value. By such treatment the ammonia is no longer volatile, and hence it is more lasting than Peruvian Guano. The phosphate of lime is rendered soluble, and therefore is at once available for plants, while the potash, uric acid, and other constituents of guano, bear a more just proportion to requirements of plants, than as they exist in the Peruvian Guano alone. Five hundred pounds of the Improved Super-phosphate of Lime have been found by frequent experiment, to be fully equal in value to thirty half cords of well rotted stable manure, and from not being volatile, lasts in the soil until consumed by the plants. The cost of this quantity is not so great as would be the expense of cartage and hauling of 30 half cords of stable manure, given to the farmer, at two miles from his gate.

The convenience of this manure consists in its small bulk, and consequent ease of handling. It may be used before or after the planting of the crop, for even when applied as a top-dressing, it cannot be lost by evaporation, as none of its constituents are volatile. A single hundred pounds applied as a topdressing to meadows, will increase the yield more than a ton per acre. As a drill manure it is unequalled, for unlike the unprepared guano, it does not destroy seed nor interfere with early growth. It may be applied in the hills during the cultivation of corn, potatoes, and other crops. When crops have been previously manured in the usual way, and found to be of sluggish growth, it may be augmented by the use of this manure. To the Horticulturist it is invaluable, as it may be applied to fruit trees at any season of the year.—More than a thousand bushels of Ruta Baga Turnips have been raised to the acre, by the application of one hundred pounds of the Improved Super-phosphate of Lime; eight hundred bushels of Long Orange carrot, and eleven hundred bushels of White Belgian Carrot have been raised to the acre, by the application of this manure. For garden crops it is all that is necessary to success. Its superiority and economy, as compared with guano, is very great. Comparative experiments have been made with this manure alongside of all other known fertilizers, and invariably with results favorable to the Improved Super-phosphate of Lime. By adding this preparation to ordinary compost heaps, the farmer is enabled to supply such deficiencies as are most frequently to be met with in soils. Throughout the Atlantic States the soils have been nearly denuded of phosphoric acid by the export of bones to Europe, and by the export of crops containing this requirement; thus we find the wheat crops of New York, Ohio, and other States, less than half what they were per acre 30 years since. The application of the manure now offered, renews the ability of these soils to raise wheat. The Tobacco lands of Virginia may at once be rendered fertile by this application, and to the dairyman it may prove an entire desideratum. Phosphate of lime exists in milk in large quantities, and therefore for continual pasture, the fields of our dairy farms require additions of this material. They also require the stimulating effects of ammonia to enable the plants to make use of phosphate of lime, and the same quantity of grass with this amendment, will be found to enable cows to give a larger amount of milk than when fed on grasses from soils not replete with phosphate of lime. Twelve thousand late Burgen cabbages have been raised from an acre manured with five cwt. of the Improved Super-phosphate of lime.—The keeping properties of vegetables raised with this and similiar manures, are much greater than when raised from putrescent manures alone. For sandy soils, which from their free character cannot retain manure of a volatile character, this manure will be found efficient, as it cannot be parted with by evaporation. Its superiority for garden use cannot be doubted, as it will not engender weeds nor insects. For bringing sluggish land into immediate heart, it surpasses stable manures, as no time need necessarily transpire to render its constituents available to plants; they are at once ready for its use, and in an unobjectionable form. When soils are prepared with this amendment, they will retain all the ammonia received from the atmosphere by dews and rains, it being immediately converted into sulphate of ammonia, and therefore no longer volatile. It will be furnished to consumers by all the principal Agricultural Warehouses, and may be had in large quantities of the subscriber, who is General Agent for the manufacturers.

Arrangements have been made with Professor J. J. Mapes to superintend its manufacture, until those engaged at the factory shall be competent to conduct it without his assistance. His directions as to the relative proportions of materials used may be strictly followed, and purchasers may depend confidently upon its always remaining of uniform quality, and of its containing nothing but the ingredients before named. Each importation of guano will be accurately tested, and the quantity used will compensate for any difference in quality that may exist. The sulphuric acid will be of uniform strength, and the phosphate of lime being invariably heated to redness before its use, will not lead to error by the presence of moisture or other accidental impurities.

The Improved Super-phosphate of lime will be delivered in bags of 160 pounds each, and parties remitting will please order accordingly.

Within the last month an article of entirely different composition from the above has been introduced into the market, and in some cases it has been purchased in mistake for the Improved Super-phosphate of Lime. Buyers will please observe that the article sold by me is marked "N. E. Berry," who is the distributing agent for the manufacturers in New York. For sale by N. E. BERRY,
mh 1-1t* 150 Lombard street, Baltimore.

CLOVERSEED—Prime Ohio and Pennsylvania Cloverseed, for sale by N. E. BERRY,
mh 1-1t* No. 150 Lombard street.

## MEXICAN GUANO.

THE Subscribers have on hand, and will continue to receive, a full supply of this valuable manure. For sale in lots to suit puechasers.

We call attention to the following analyses by Dr. Stewart of this city:

Analysis of two cargoes of Mexican Guano, recently imported by Messrs. C. R. Pearce & Son, per ships Thorndike and Lanark.

*Proximate Analysis.*

| | Thorndike. | Lanerk. |
|---|---|---|
| Organic matter, containing some azotized compounds capable of forming ammonia. | 05.47 | 05.86 |
| Water. | 25.32 | 30.09 |
| Ash, or proportion of mineral elements. | 69.21 | 64.05 |
| | 100.— | 100.— |

*Composition of the above Ash:*

| | T. | L. |
|---|---|---|
| Phosphoric acid. | 33.52 | 33.52 |
| Lime. | 26.35 | 22.81 |
| Sand. | 00.30 | 02.39 |
| Magnesia and soda, with a trace of potash. | 09.04 | 05.33 |
| | 69.21 | 64.05 |

The ash or mineral portion is very pure bone ash in a state of minute division, containing a larger proportion of phosphoric acid than bone phosphate of lime. Bones yield about one half their weight of bone phosphate of lime, whereas *these cargoes* yield sixty-nine per cent. DAVID STEWART, M. D.

Baltimore, 5th January, 1854.

P. S. I took the samples myself from many parts of these large lots, beneath the surface in every case. D. S.

### OPINIONS OF AGRICULTURAL CHEMISTS.

Dr. Higgins, Maryland State Chemist, in his Report of '53, page 102, says of the Mexican Guano: "There have been some interesting trials made with this Guano in comparison

with the other varieties now in the market, which shows that the Mexican Guano, applied in quantities of equal cost with the Peruvian, equalled it in the first year. But inasmuch as the Mexican Guano is a *permanent manure*, it will produce equally good effects on the second and third, as on the first crop"—Page 106. "If the wheat crop is to be followed by Clover or Corn without manure, then in *the absence of a knowledge of a proper quantity of phosphates in the soil*, the following should be used:

| | |
|---|---|
| Peruvian Guano, | 50 to 150 lbs: per acre. |
| Mexican " | 200 " " |
| Sulphuric Acid, | 35 " " |

Take the Mexican Guano, lay it on a floor in a heap, as if sand and lime were to be mixed for mortar, and gradually add the sulphuric acid, stir it well with a spade, and when the whole is mixed, let the mass lay for several days; then add the Peruvian Guano in the proportion named above; this will then be in the proper condition for sowing, and will be permanent in its effects.

The celebrated Professor Way, Assayer to the Royal Agricultural Society of London, in remarking upon a specimen of Mexican Guano sent to him for examination by our house, and from same locality as cargoes now on hand, says: "London, 5th October, 1853.—I beg leave to enclose you an analysis of the two samples of Guano. They are practically identical in composition, and of the character of the 'Phosphatic' Guanos, such as the Saldanha Bay variety, (known in this market as African) Guano.) I may further mention, that the nature of the Guano is such that it would suffer no appreciable injury by exposure to weather or the sun, and there is abundant demand for such quality in this market, both for turnip and other root crops.

Signed, "J. THOMAS WAY, London,
"Assayer to the Royal Ag. Society, of England."

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MEXICAN GUANO—Its Money Value in relation to other Manures.—Concentrated manures and labor saving machinery, have become synonomous ideas in agriculture.—The more complicated and expensive machines have been pruned, until their simplicity of construction brings them within the reach of every farmer. Science has been equally busy in sifting the chaff from manures—but the agriculturist is slow to appreciate this improvement. The *non-essentials* in manures, as in other things, cost more, and are the source of more controversy than the more important principles.—The celebrated Baron Liebig, whose untiring investigations on this subject, together with his open and unhesitating recantation of any error which he may have adopted, merit for him our confidence, as *the* honest philosopher of the age, was at one time devoted to the Ammonia theory, but has, for several years attached more importance to those persistent manures which are permanent in their influence. He does not deny the trancient influence of Ammonia, nor its value on *many* soils, which do not contain a sufficient quantity naturally, but he prefers to improve the texture of the soil, and obtain the natural supply from the atmosphere, rather than purchase it for every crop; especially as four-fifths of the air we breathe is *the* element of Ammonia, and plants exhale or give off more Ammonia than we ever give them in manure. By increasing the proportion of *soluble* silica in a soil, Ammonia will be rendered *available*, and the soil will *supply itself;* but there is another element (Phosphoric Acid) which cannot be naturally supplied, if deficient in the soil, which *all* admit, *must* be applied artificially, in order to insure the full developement of the resources of the land, and the full return for the labor bestowed on its cultivation.

It is now universally admitted that these two, Ammonia and Phosphoric Acid, are the valuable elements of all manures; and effects have been attributed to ashes and marle, and even lime, which were entirely due to the Phosphoric Acid they all contain. See Harris' Prize Essay on Phosphoric Acid, Patent Office Report, 1852-'3, page 402; also page 391.

"Per cent." of Phosphoric Acid in Cotton Plant seed, Red and White Wheat.

(These figures must be *more* than doubled in order to form

| | C. | P. S. | W. | W. |
|---|---|---|---|---|
| Bone Phosphate of Lime,) . . . | 13 | 35 | 47 | 44 |
| Other elements, (*fractions omitted,*) . | 87 | 65 | 5356 | |
| | 100 | 100 | 100 | 100 |

1 ton Peruv. Guano yields about 500 lbs. Bone Phos. Lime.
" Mexican " " " 1,400 " " " "
" Bones " " " 1,000 " " " "

If Bones are worth $25 per ton, the Mexican Guano is worth $35 per ton. Bi-phosphates may be formed by simply mixing one ton of Mexican Guano and 500 lbs. Oil of Vitriol with a spade on an earthen floor or pavement; but my experience in the use of Bi phosphates would lead me to compensate for insolubility by adding more of the Phosphate, rather than by converting it into a Bi-phosphate. For instance, if 300 pounds of Mexican Guano will give one-half pound of soluble Phosphoric Acid to an acre every month, and I want 1 pound per month, I prefer to apply 600 pounds, rather than spend the money in Oil of Vitriol; and, at this rate, 600 pounds of Mexican Guano should supply my soil for 35 years, and for a much longer period, if any should result from the *natural* disintegration of the soil in the meantime: indeed, Caird's English Agriculture says that "lands *once* dressed, *never* revert again to their original impoverished condition," (referring to grass lands.)

This Guano should be sown broadcast, at the rate of two barrels per acre, and can be applied on land recently limed, where it would be impossible to use Peruvian Guano without great loss. *As a top dressing to any crop that has lost its color, or appears yellow*, it should be mingled with 50 pounds of Nitrate of Soda, which can be had at 5 cents per pound, and is much cheaper and more efficient than Peruvian Guano, *as a Spring dressing*. See P. H. Pusey, "on Cubic Salt Petre, and its use in *small quantities*, as a restorative to corn crops," page 16, London, 1853.

Baltimore, Feb. 7, 1854. David Stewart, M. D.

Dr. J. S. Armistead, of Virginia, in a letter dated February 8, 1853, and published about that time in the Richmond Enquirer, particularly recommends this Guano for Tobacco.—He remarks: "Our old lands in this region, and I doubt not, generally in Middle Virginia, are more deficient in phosphates and pot-ash than any other of the mineral manures; and the Tobacco plant must have these elements in order to ripen it well. The Peruvian Guano has but a small part of its value in phosphates—only about one-sixth—and five-sixths of its money, or near $40 per ton, in ammonia, which powerfully stimulates the growth of Tobacco, without causing it to ripen, or without giving it the healthy growth which will ensure it against firing. The Mexican Guano is the richest that has been brought to this country in phosphates."

C. R. PEARCE & SON, Importers,
66 Buchanan's Wharf,
mh 1 And by PAGE, SHARP & CO. Exchange Building.

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ZIMMERMAN & CO'S CELEBRATED PATENT

## Premium Thrasher, Cleaner & Bagger,

WHICH received the First Premium at the Crystal Palace, N. York, this making 10 Premiums in two seasons, in competition with the most celebrated Separators of the day; proving conclusively, that simplicity in construction, cheapness in price and durability in machine, is being fully appreciated, and the old complicated costly separators must yield their place to a superior machine. This Machine, for threshing, separating, cleaning twice, screening and bagging, (by one simple operation,) all kinds of Grain—the greatest labor-saving machine extant, for simplicity, durability, cheapness and capacity, it has no rival in the world. It is capable of turning out, ready for the mill or for seed, from 300 to 500 bushels of Wheat per day, with 6 or 8 horses, and 8 hands—or from 500 to 800 bushels with 12 horses and as many hands, doing the work cleaner, and breaking less grain, than any machine now in use. This machine received the first premiums at the Maryland State Fair, Balt., in 1852 and 1853; the Washington Co. Md. Fair; Valley Agricultural Fair, of Virginia, in 1852 and 1853; the Rappahannock Agricultural Society, at Port Royal, Va.; Indiana State Fair, Indianapolis, 1853.

This machine is so simple in construction, that the one fan and shoe completely cleans and bags the grain, dispensing with all the complicated machinery (and consequent liability of derangement) in all other separators, thus making it more desirable to the farmer.

☞ Shop Prices of Zimmerman & Co's. Thresher, Cleaner, Bagger and Power.—Thresher, Cleaner and Bagger complete, 6 and 8 horses, $175—Power for same, $100, making $275 for the whole complete. Thresher, Cleaner and Bagger, 36 inch Cylinder, $200; Power for same $135, for 8, 10 and 12 horses. This machine is complete with Band, Wrenches, &c.

☞ REFERENCES—Samuel Sands, Esq., Editor of the "American Farmer;" Col. Edward Lloyd, Easton, Md.; Capt. D. Cox, Northumberland Co. Va.; Hill Carter, Esq., Richmond; Richard Willis, Esq. Richmond; Col. Charles Carroll, near Ellicott's Mills, Md.; F. Nelson, Esq. Richmond; Col. B. Davenport, Jefferson Co. Va.; Dr. Harding, Northumberland Co. Va.; Capt. Harding, Northumberland Co. Va.; Hugh Nelson, Esq. Clarke Co. Va.; Charles Mason, Esq. King Geo. Co. Va.; S. W. Thomas, Esq. Clarke Co. Va.; Dr. T. J. Marlow, Frederick city, Md.; David Boyd, Esq. Frederick city, Md.; Ezra Houck, Frederick city, Md.; Samuel Holt, Middletown Valley, Md.; John Clagett, Hagerstown, Md.

☞ The above machines are manufactured in Charlestown, Jefferson Co. Va. All orders addressed to us will be attended to with promptness, and all threshers sent out warranted to come up to the standard.

Mh 1 ZIMMERMAN & CO.

## THE GREAT PREMIUM FAN.

*Patented, December 20th, 1853.*

*MONTGOMERY'S CELEBRATED DOUBLE SCREEN*

## ROCKAWAY WHEAT FAN,

Has, during the past year, been proved to be the best Fan ever offered in the Middle States, having taken premiums over all that have been offered to the public from every quarter of the United States. It took

THE FIRST PREMIUM

At the MARYLAND State Agricultural Society's Exhibition, in October last, where all the most celebrated Fans were in competition

THE FIRST PREMIUM at the VIRGINIA State Agricultural Society's Exhibition, in November last.

THE MARYLAND INSTITUTE awarded SILVER MEDALS to it, at its Exhibitions in 1852 and 1853, as superior to all others on Exhibition.

THE FIRST PREMIUM was awarded at the Talbot Co. (Md.) Show, in 1852; and

THE FIRST PREMIUM at the Prince George's Co. (Md.) Exhibition, in 1853, by the special vote of the Society, in consequence of its superiority and value, it being contrary to their standing rules to award premiums to articles made out of the County.

We annex the following certificate from a respectable farmer of St. Mary's Co., and any number of others could be published if necessary, all tending to show the decided superiority of this Fan over any others that have ever been introduced in the Middle States—and as the manufacturers devote their whole attention to this one article, and rely for its continued success upon the faithfulness of its make, as well as the superiority of its principles of construction, farmers and others may rely on having their Fans made of the best materials and workmanship.

ST. GERAMERS, ST. MRAY'S CO. MD. Oct, 6, '53.

This is to certify, that I have tried Messrs. J. Montgomery & Bro's. Wheat Fan in some tailings I made in cleaning a part of my crop, which I did not think could be made worth anything; it extracted from a bushel and a half of filth about three pecks of pure wheat. I must say that I never saw a Fan that can even come in competition with J. Montgomery & Brother's Rockaway Wheat Fan, for screening wheat.

BENJAMIN MCKAY.

All orders addressed to the undersigned, at the Baltimore city (Md.) Post Office, will be promptly attended to.

J. MONTGOMERY & BRO.

No. 155 N. High St. between Hillen and Gay Sts. Balt.

jan 1-1t*tf

## World's Fair Premium Corn Sheller.

IMPORTANT TO FARMERS!

### READING'S PATENT PREMIUM

## Horse Power Corn Sheller.

THE subscriber takes this method of informing the farmers of Delaware, Eastern Shore, Virginia and Maryland, that they have purchased from Wm. Reading, Patentee, Washington city, the Exclusive Right for the manufacture and sale of the above Machine, in the territory specified above—and they are now prepared to sell them at the low price of $35.

This Machine was awarded the First Premium by the New Castle County Agricultural Society, at their Exhibition on the 13th October, 1853, and wherever it is used it is preferred to all others, for several reasons, viz:—1st.—It separates the cob entirely from the corn, thereby saving two hands in thrashing. 2nd.—It breaks the corn and cob much less than other shellers. 3d.—It shells faster than any other in use; 4 horses and 4 men can shell with ease one thousand bushels in one day, and 6 men and 6 horses can shell fifteen hundred bushels per day.—4th.—From the simplicity of its construction, it is not liable to get out of order, being in this respect also superior to all others in use.

This Machine took the First Premium at the World's Fair, at the Crystal Palace in New York city; the First Premium at the Fair of the American Institute, New York; and the First Premium at the Fair of the Franklin Institute Philadelphia. It is warranted to give satisfaction in all cases.

All persons are hereby notified that no other person or persons are authorized to sell Reading's Patent Corn Sheller in the before named territory—and legal measures will be taken towards all persons who sell, or offer to sell the before named machine in the territory before described.

All orders addressed to the subscribers at Delaware city, Del. will be promptly attended to. E. J. HYDE.

*Delaware City, Oct. 20, 1853.* jan 1-3t

## Poultry---Poultry.

THE undersigned had nearly 100 coops of Fowls at the late State Show, held in this city, embracing the very choicest birds, of almost every clime, and was awarded the premium for the largest collection, and also for many individual fowls—(See list in American Farmer)—He is prepared to sell at a moderate rate, and invites those wanting really fine and pure breeds to visit his collection, or leave their orders with Mr. Sands, at the Farmer Office, and they will be attended to the same as if on personal application. G. W. LAWRENCE.

nov 1-6t Catonsville, Balto. Co., Md.

## Fine Ground Plaster.

THE subscriber respectfully informs the Farmers and Planters that he has on hand a large and selected stock of first quality LUMP GYPSUM, received direct from particular quarries, (the purity of which he has had tested by various analyses,) from which he is manufacturing a superior article of ground Plaster, warranted pure—each barrel of full weight, and in good shipping order, marked with his own name. For sale on most favorable terms. WM. A. DUNNINGTON,

Steam Plaster Mill, Hughes St. on the Basin.

☞Orders received at Messrs. ASA NEEDHAM & SON'S, 140 Light Street Wharf. Nov 1-6t*

## MEXICAN GUANO.

WE have now landing the cargo of Brig Susan, of very superior quality, for sale in lots to suit purchasers.

☞This Guano has been used alone the two past seasons, with excellent effect, and is recommended by farmers, and by the State Chemist, mixed with Peruvian, for certain soils—200 pounds Mexican to 100 pounds Peruvian. It is moreover a permanent manure, and will produce equally as good effects on the second and third, as on the first crop. (See Third Report State Chemist, pages 102 to 106.) THOMPSON & OUDESLUYS,

jan 1-3t No. 57 South Gay Street.

## PERUVIAN GUANO.

THE UNDERSIGNED, AGENTS of the Peruvian Government for the importation and sale of Guano into the U. S. beg to inform the public, that in pursuance of orders received from the said government, the price of guano has been advanced to the rate of $50 per. ton.

Any duties or charges imposed by the laws of the different States in which it may be imported to be paid by the purchaser. Baltimore, 17th January, 1854.

feb. 1 F. BARREDA & BROTHER.

## Mineral Phosphate & Bi-Phosphate of Lime.

THIS manure is applicable to all soils that are deficient in Phosphoric acid, a deficiency which exists when the land has long been cultivated without restoring the Phosphates which have gone to form Bones, Milk, and other animal secretions. It is chemically identical with Bones, in a much more convenient form—is the valuable constituent in Guano—is cheaper than Bones, or Mexican or Patagonian Guano, and reduces the cost, whilts it increases the permanency of the effect of Peruvian Guano.

The Mineral Phosphate of Lime has now been sufficiently tested to prove that it is the cheapest and most convenient fertilizer within the reach of the Farmer and Planter.

The price is dependent on the proportion of Phosphoric acid. The present supply is sold at $20 per ton of 2000 lbs. for the Phosphate, and $30 for the Bi-Phosphate, or Super-Phosphate, formed by combining the powdered mineral with sulphuric acid, answering to dissolved Bones.

EVAN T. ELLICOTT,

jan 1-tf Lombard Street, near Hanover.

## NEW BRICK MACHINE,

NOW IN SUCCESSFUL OPERATION IN BALTIMORE.

IT is so simple that any intelligent negro can learn to manage it in two or three days. You have merely to shovel clay into a box, and attach a horse to the sweep. The machine tempers the clay, and moulds the bricks in the most perfect manner, such as the most experienced hand can scarcely equal. When burned, they are found to be stronger and more solid than those made in the usual way, because the clay is worked stiffer under the pressure of the screw, than it is possible to mould by hand. For a machine driven by steam, the clay is taken direct from the bank and passed through a pulverizer, which removes the stone and prepares it for the soak pit. Supposing the clay at hand, nine men and three boys will mould 1,500 bricks per hour. Price, $500. A five mould machine, worked by a horse, with four men and four boys, will make 1000 bricks per hour—Price, $300. A four mould, with the same force, will make 800 bricks per hour. Price $250. Obtained gold medal from the Maryland Institute, 1852; premium from the Maryland Agricultural Society, 1853.

For further particulars, in a Pamphlet containing full instructions on Brick Burning, address

Dec 1-tf FRANCIS H. SMITH, Balt.

## SUFFOLK SWINE,

PUREST BLOOD and finest specimen in this country—the same stock as I showed at the Maryland State Fair last Fall. GEO. W. WILSON,

nov 1-6t* Malden, Mass.

## Dutchess Swine.

*Mr. Editor:*—When the Mount Airy Agricultural Institute discontinued, I purchased Mr. Wilkinson's entire stock of Dutchess Swine, and have now on hand a number of choice PIGS of both sexes, and various ages, for sale at reasonable prices. D. LEAVITT, Jr.

jan 1-6t.* Great Barrington, Berkshire Co. Mass.

## YOUNG GIFFORD,

ONE of the finest colts of the celebrated Old GIFFORD MORGAN—dam, by Billy, the well known Root horse; grand dam by Old Justin Morgan, out of a Morgan Mare.—Six years old the 20th May last—of a rich dark, and deeply mottled chesnut color.—Will stand next season, commencing 1st April, at Birch's Stable, 14th Street, Washington City—at Good Hope, near Washington, and in Alexandria, Va., and at the Stables of the subscriber. $20 the season, and $30 to insure. ☞Particulars in small bills.

WM. HENRY DAINGERFIELD,
aug 1-1yr Wood Cot, Md. near Alexandria, Virginia.

AGENCY FOR THE PURCHASE AN SALE OF IMPROVED BREEDS OF ANIMALS.—Stock Cattle of the different breeds, Sheep, Swine, Poultry, &c. purchased to order and carefully shipped to any part of the United States—for which a reasonable commission will be charged. The following are now on the list and for sale viz:

| | | | |
|---|---|---|---|
| Thorough bred Short Horns and Grade Cattle | | | |
| Do | do | Alderney | do do |
| Do | do | Ayrshire | |
| Do | do | Devons | do do |
| Do | do | South Down Sheep | |
| Do | do | Oxfordshire | do |
| Do | do | Leicester | do |

Swine and Poultry of different breeds.

All letters, post paid, will be promptly attended to. Address AARON CLEMENT,
mh 1 Cedar st. above 9th st., Philadelphia.

A VERY VALUABLE FARM IN STAFFORD COUNTY FOR SALE, known by the name of RAVENSWOOD, lying on Potomac Run, three miles from Falmouth, Va., (the Great Southern Stage Road passes through it.) containing 611 Acres. About 350 acres bottom land, cleared, the rest in wood and timber; about 30 acres well set in clover, and 75 acres was sowed this Spring in clover, timothy, herd's grass, orchard, and other grass seeds, mixed.

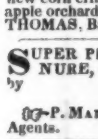
The buildings are a good BRICK DWELLING HOUSE, slate roofed, containing 4 good rooms on the lower floor, and 3 on the second floor; a good Grist Mill just repaired, Ice House, Smoke House, Corn House, and all necessary out houses, such as Barn, Stables, four good out Houses for overseer's and negro quarters, &c., and three tenements in the woods, rented. A further description is deemed unnecessary, as it is supposed any person wishing to purchase would examine the premises. It is well situated to be divided into two or three farms. If desirable a very liberal credit will be given on one-half the purchase money. For further information apply by letter, or otherwise, to the subscriber on the premises. Direct letters to the Falmouth Post Office. DANIEL SOMERS.
Feb. 1-3*. Ravenswood, Stafford Co., near Falmouth, Va.

FOR SALE—*GREEN BANK FARM AND FISHING SHORE*—in Cecil County, Md., two miles below Charlestown, and on the Railroad between Baltimore and Philadelphia, about two hours ride from either city. It contains one hundred and seventy-five acres of land—one hundred and twenty in fine cultivation—the rest in Wood. Improvements are,—a good two story Tenant's House, Barn, and Stabling—large new corn cribs and wagon-house—fishing houses, &c. Young apple orchard & other fruit trees. Apply to DR. RICHARD H. THOMAS, Balt., or RUSSELL THOMAS, North East. feb. 1-3t.

SUPER PHOSPHATE OF LIME, OR CHEMICAL MANURE, in bags of 150 lbs. each, manufactured and sold by WM. PATTERSON, Davidson St. Wharf, Newark, New Jersey.

☞P. MALCOLM & SON, Bowly's Wharf, are the Baltimore Agents. aug 1-tf.

## Fruit and Ornamental Trees for Sale.



**40,000** PEACH TREES, of one year's growth from the bud. 40,000 APPLES. 5,000 Standard CHERRIES. 8,000 Dwarf PEARS, and Cherries, each containing all the most esteemed varieties, and of large size.

Also, Standard Pears, Plums, Nectarines, Apricots, Almonds, Grapes, Raspberries, Currants, Strawberries, &c., &c., 100,000 Seedling Silver leaved Maples, of one year's growth. 50,000 Deciduous and Evergreen ornamental trees of large size. Persons residing at the Southand West should send their orders early.

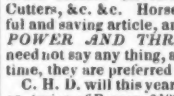
Catalogues, with prices annexed will be sent to all applicants. Address, ISAAC PULLEN,
feb. 1-2t. Hightstown. Mercer Co. New Jersey

FOR SALE—One of Smith's "NEW BRICK MACHINES." For recommendation of this machine the subscriber would refer to the advertisement of Mr. F. H. Smith, the inventor—It is a 5 mould machine, and will be sold low. It has not been injured by use. feb3t THOS. J. ROBINSON, Fayetteville, N. C.

C. H. DRURY, *corner of Camden street and Light street wharf*, having completed his establishment with Foundry connected, for the making his own Castings, is prepared to furnish all varieties of *AGRICULTURAL IMPLEMENTS* and *CASTINGS*, made to pattern of the best material.

The following is a list of PLOWS kept constantly on hand: Davis, of the different numbers, for wrought and cast shears, S. & M., Chenoweth, Wiley, 2 and 3 furrow, No. 0, Hill side, No. 1 and 3 Connecticut—Beach Improved or Posey Plow, with common Davis cast shear—Self-sharpener or wrought shear—Corn Cultivators, plain and expanding—Tobacco do.—Wheat Fans—Corn shellers with double hopper—Old Vertical and Virginia sheller—Harrows—superior Pennsylvania made Grain Cradles—Revolving Horse Rakes—Cylindrical straw Cutters, &c. &c. Horse Power *GRIST MILLS*, a very useful and saving article, and coming into general use. *HORSE POWER AND THRESHING MACHINES*, of these I need not say any thing, as wherever they have been in use any time, they are preferred to all others.

C. H. D. will this year make a smaller size Power & Thresher, (price of Power, $100, Thresher, $50, Band, $10, or when taken together, complete, $150 cash.) Persons in want of Implements made of the best material, and put together in the strongest and best manner to answer the purpose for which they are intended, are invited to call on the subscriber. jel



## TO FARMERS.

THE undersigned, by this method, would apprize the Agricultural community, that he is still engaged in the manufacture of the renowned *Wiley, Empire*, and other choice Plows. He also manufactures and has for sale, a number of the best and most efficient Farming Implements in use. Call before purchasing elsewhere, as his terms are such as cannot fail to please. All implements guaranteed.

☞AGENTS for the *Wiley, Empire*, Boston, Woodstock and other Plow Castings. A. G. MOTT.

At the old stand, No. 38 Ensor, street, and at No. 51 N Paca street, opposite the Hand Tavern, Balt. mh-1.

AGRICULTURAL IMPLEMENTS.—LABOR SAVING MACHINERY.—*GEORGE PAGE, & CO.* Machinists and Manufacturers, Baltimore st. West of Schroeder st. Baltimore, are now prepared to supply Agriculturists and all others in want of Agricultural and Labor-saving MACHINERY, with any thing in their line. They can furnish Portable Saw Mills to go by steam, horse or water power; Lumber Wheels; Horse Powers of various sizes, ranging in price from $85 to $190, and each simple, strong and powerful. Their *Horse Power and Thrashing Machine*, they are prepared to supply at the low price of $125 complete; the Thrashing Machines without the horse power, according to size, at $30, 40, 65 and $75; Improved Seed and Corn Planter; Portable Tobacco Press; Portable Grist Mills complete, $165. feb 1

## Important to Purchasers of Lumber.

THE UNDERSIGNED having superior advantages in the purchase of LUMBER, can sell *Shingles, Laths, Cullings, Pickets*, &c. at low prices; from the wharf, foot of McElderry's Dock, & opposite State Tobacco Warehouse, No. 1.
aug 1-1yr ROBERT HOOPER.

## JAMES BAYNES, Wool Dealer,

*Warehouse No. 105 Lombard st. near Calvert, Balto.*

IS prepared at all times to give a fair market price for WOOL of all descriptions. He would recommend to farmers to be more particular in washing their Wool, and in getting it in good order before bringing it to market, to ensure hem a fair price. The demand is good, and the probability is, that it will continue so the coming season. Those having wool to dispose of, are invited to give him a call before disposing of their fleeces. Any information as to putting it up for market, &c. will be freely given.

*References*—B. Deford & Co., and Wethered Brothers, Baltimore—Jas. Mott & Co., and Houston & Robinson, Philadelphia. Ap. 1-1yr

## A. E. WARNER, No. 10 N. Gay st.

MANUFACTURER OF SILVER WARE, FINE GOLD JEWELRY, and importer of BEST SILVER WARE, FANCY ARTICLES, &c. would respectfully invite the attention of those in want of any of the above articles, that he keeps always on hand, and makes to order, every variety of Silver Ware, fine Gold Jewelry, and best quality Silver Plated Ware, which he will sell on the most accommodating terms. Feb. 1-tf

## To the Farmers of the South.

THE UNDERSIGNED hereby gives notice that he will have a supply of his IMPROVED COMBINED REAPING AND MOWING MACHINES—much improved in construction since the last harvest—in the markets of New Jersey, Delaware, Pennsylvania, Maryland and Virginia, and also for more Southern demands, so far as made in time. He has made arrangements for a permanent depot of his machines in the city of Philadelphia, to be superinded by R. T. Elbinton Esq., who has for some years been an efficient agent in selling and attending to the same, and who will keep on hand a supply of the requisite material for replacing or repairing all parts of the machines. Many local agents are now engaged in the sale of these machines in the different States mentioned, and others are being appointed in other localities. Full particulars in detail can be had from the local agents.

The subjoined extract from the London Mechanics' Magazine, published in December last, and letter of the Right Hon. Lord Kinnaird, of Scotland, Landlord of Mr. Geo. Bell, manager and user of the Revd. Patrick Bell's Reaping Machine—will show something of the relative standing of the different Reapers in Great Britain; and when it is recollected that other Reapers there have not been secured by patent, these papers prove at least the correctness of the decision at the World's Fair, in 1851, awarding for my Reaper the great COUNCIL MEDAL.

I may add that this machine is warranted the best in use.

The following is the extract referred to, from the London Mechanic's Magazine, giving an account of the Annual Exhibition and Cattle Show, of the Smithfield Society, in London:—

"We especially regret the want of an opportunity to point out what we conceive to be serious defects in Smith's Reaping, and several other machines. * * * * * * In conclusion, we cannot refrain from pointing out the attempt made to palm off, as Bell's Reaper, a machine of which the form of blade introduced by Mr. McCormick was, perhaps, the most conspicuous feature; and we may also add, that Mr. McCormick's were employed in nearly the whole of the Reaping Machines on Exhibition."

ROSSIE PRIORY,
Dec. 19, 1853. Luciture, N. B.

"Sir:—Mr. McKenzie was to forward to you a letter from me on the subject of Mr. Barry's making your machine. I saw Mr. Bell on Saturday, and he says that Mr. Croskill, [maker of Bell's machines,] will give you three pounds *royalty* for your Cutter. He probably has written to you, but if not, and you give me authority, I will settle with him for you. You should do this *without loss of time*, as it would put a stop to all attempts to evade your patent—and with three pounds for Bell's, and five pounds for your own improved machine, as I proposed, you would secure all the machines in the country. Your obedient servant, KINNAIRD.
C. H. MCCORMICK, Esq.

An early answer will oblige.
Washington, D. C. Feb. 2, '54. mh 5-1t

FOR SALE—A *CHESTER SOW*, 1 year old, with 7 Pigs. Also another Sow, same breed, 18 months old, with 6 Pigs, two months old—all of my premium stock. A young BOAR, same breed, 16 months old, took a premium at our late Cattle Show—and another Boar and 4 Sow Shoats, same breed, 6 months old. A pair of ½ Berkshire and ½ Chester Pigs, 3 months old. ☞Likewise, GREY CHITTAGONG FOWLS, of the stock which bore off the Premium last Fall.
C. WARNS,
mh 1-1t* Elkridge Landing, Md.

## Lands in Virginia for Sale.

ON the 17th DAY OF APRIL, 1854, if fair, if not, the next fair day, by virtue of authority vested in me, I shall sell to the highest bidder at public auction, the following tracts of land in Westmoreland, Va.:

SPRINGFIELD, the former residence of John Bailey, decd., containing 301 acres, more or less. It lies near Yeocomico river, and has on it a Dwelling House, Barn, &c.;

ROTANK & ELMORE'S tract, lying adjoining each other. On the Elmore tract is a body of valuable White Oak Timber, and of valuable cord wood, principally Oak, within a mile and a half of Yeocomico river, one of the most accessible in Lower Virginia. The buildings are small. Rotank contains about 290 acres, chiefly in pine woods. Elmore contains 180. These tracts will be sold separately or together, as may be most advisable, and they will be surveyed before the day of sale.

Another piece, 65 acres near Cretchen's mill, and adjoining W. J. Courtney, and others—sale to commence at Elmore.

☞Terms liberal, and will be made known on the day of sale.
R. MAYO, JR.
Hague, Westmoreland, Va.

P. S.—The place of sale may easily be reached by steamers Columbia and Osceola, which stop at Sandy Point, (Forbes') and Kinsale. mh1- 2t

## HORNER'S PREPARED ANIMAL MANURE.

THE subscriber asks the attention of the farming community to the following analysis by Dr. Jas. Higgins, State Chemist, and comparison between his prepared Animal Manure, and Patagonian and Peruvian Guano. It is necessary for a full understanding of the comparison, to state, that his Compound costs but 25 cts. per bushel, or $12 per ton. This preparation has been used with much success on the tobacco crop, and testimonials from Mr. Reynolds, Mr. R. H. Hare, Col. Bowie, and other well known planters and farmers, who have purchased it for Corn, Wheat, Tobacco, and spring crops generally, can be produced as to its efficiency, by practical tests. The bones used in the Animal Manure are now dissolved with sulphuric acid, which was not the case heretofore.

Put up in barrels at $2 per barrel.

Apply at the corner of Chew & Ensor streets, Old town, Baltimore.
JOSHUA HORNER.

LEONARDTOWN, OCT. 7th, 1851.

To Mr. J. HORNER, Baltimore—*Dear Sir*:—Below I send you a statement of your Manure as to its essential valuable constituents, and the relation which it bears to Patagonian Guano. A ton of your Manure contains of

| | |
|---|---|
| Ammonia, | 54 34-100 pounds |
| Phosphate of Lime, | 523 do |

The average of Patagonian Guano by the ton, as it is sold, contains of

| | |
|---|---|
| Ammonia, | 60 pounds |
| Phosphate of Lime, | 800 do |

Estimating Patagonian Guano and your Manure by the same rule as to the value of the several constituents, the Patagonian Guano would be worth $19.20 per ton, and your Manure $14.44. If Patagonian, therefore, be worth $38 per ton, your Manure is worth about $28.50 per ton.

THE VALUE OF PATAGONIAN GUANO AND YOUR MANURE, I DETERMINE BY THE AGGREGATE VALUE OF THEIR SEVERAL VALUABLE CONSTITUENTS, and *by the same rule* which would make Peruvian Guano worth $46 per ton. Your Manure also contains 122 pounds of Gypsum, 114 pounds of Salts of Potash and Soda, and 300 pounds of Lime to the ton, being about equal to Patagonian Guano, of average quality, in these constituents.

Very truly yours, &c.,
JAMES HIGGINS, St. Ag. Chemist.

P. S.—You can make what use you please of this. mh 1

## Bone Dust.

The subscriber will furnish ground Bones, warranted free from every mixture, *or the entire quantity forfeited*. He has lately made such an improvement in his machinery for crushing bones, as to enable him to sell an article better than ever before offered, a sample of which can be seen at the office of the American Farmer. My Bone Dust weighs, from the manner in which it is manufactured, 55 to 60 lbs. per bushel. Price, 60 cts. per bushel.

None of my manufactured, Bone Dust is sold, except at my Factory. JOSHUA HORNER,

Corner of Chew and Ensor sts., Old Town, Baltimore, or orders may be left with Mr. S. Sands, at the office of the American Farmer.

I furnish to my customers, when bags are not sent, 2 bushel bags, 6¼ cents each.

*Reference*.—Messrs. Randolph, Gollbart & Co., 158 Thames street. mh 1-tf

LIVE STOCK AGENCY.—In compliance with repeated solicitation, the subscriber offers his services for the purchase of Horses, Cattle, Sheep, Swine and Poultry.—His long acquaintance with the different breeds and *breeders* of these animals, gives him superior facilities for procuring the best. SANFORD HOWARD,
mh 1-3t Office Boston Cultivator, Boston, Mass.

FOR SALE—2 pair STEERS, 3-4 Devon, 3 yrs. old, delivered this Spring, broke and matched, at $100 per pair. Also, 2 HEIFERS, 3-4 Devon, 2 yrs. old this Spring; one a red white faced muley—the other a *black*, very handsome, out of a fine milker. Apply at this office. mh 1-1t.

## BLACK HAWK TICONDEROGA

WILL make a Spring Season at *Govanstown*, Baltimore Co. about 4 miles from Baltimore, on the York Road, commencing on the 20th of March; he will be permanently at that place, as no engagements will be made for him elsewhere.

This Horse took the First Premium at the Maryland State Show, in 1852, and for 1853 in the class of Premium Animals.—He also took the first premium at the Virginia State Show, in November, 1853—thus establishing his character over any horse in the Middle States.

For further particulars, reference is made to hand-bills, descriptive of the Horse, pedigree, &c.—and for terms, apply to jan 1-3t* FRANKLIN FELTON.

THREE DEVON BULLS, one 4 yrs. old, price $12); one 9 mos. $100; and one 6 mos. $65—superior stock—for sale. Enquire at this Office. feb 1

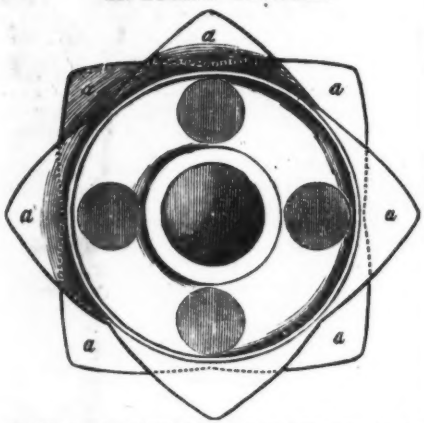
**Sands & Mills, Book and Job Printers,**
Office of the "AMERICAN FARMER,"
Are prepared to execute every style of Book and Job Printing.

FIGURE REPRESENTING THE CROSS SECTION OF

*SINCLAIR & CO'S.*

## Patent Screw Propeller Feed,

OR STRAW CUTTERS.




THOSE new and valuable Feeding Works may be thus described:—On the feeding roller are right and left Fins so arranged as to form a Double Spiral Screw, for the purpose of feeding forward the Straw, preventing it from crowding to the right or left of the box, and compressing it as it is passed to the Knives. These Fins are made of Cast Iron, and arranged as seen clearly by the Figure—there being 8 rows on a cylinder, (more or less), and alternating so as to form a Right and Left Spiral. The Fins are pyramidal, or tapering. This form is essential to the proper action of the Double Spiral, and it will be observed that these Fins, constituting the Spiral, do not drag the straw forward, but propel it as it were, and hence their sharp edges, which must enter between the straws, and propel them obliquely forward on the Screw or Spiral principle. The result of this improvement is a reduction of draught, and performance, equal to 30 per cent over the old pattern Cylinder Straw Cutter—saying nothing of the reduced complication, greater durability, &c.

The following respectable certificates are a part of the many in our possession, which speak in the highest terms in regard to the improvement, which fully sustain our remarks.

R. SINCLAIR, JR. & CO. Baltimore.

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HAREWOOD, 11mo. 24, '53.

*To R. Sinclair & Co.*

Annexed is a note from my friend Blair, respecting the Cutting Box, selected by me at his request. In addition to what he says of it, (after an extended use of it for several months), I may remark, that I know of no form of Knife for cutting hay and straw, equal to the Cylindrical; nor any plan of self-feeding gearing that is in my opinion so simple and efficient as your Screw Propeller.

Respectfully, your friend,

EDWARD STABLER.

---

SILVER SPRING, November 22, '53.

*Friend Stabler:*—The Sinclair & Co. Hay Cutter gives me entire satisfaction. It is a much improved one, compared with the first I had from them, and indeed upon any I have ever used in my cow-feeding establishment.

Your friend,

jan 1-tf F. P. BLAIR.

---

LIME FOR SALE, FOR AGRICULTURAL PURPOSES.—The Gas Light Company of Baltimore have for sale "OYSTERSHELL OR GASHOUSE LIME" in quantities to suit purchasers, at the low price of 3 cents per bushel.

Chemical analysis shows this Lime to be better adpted—as a fertilizer—to much of the soil of the State of Maryland, than "Stone Lime."

See Dr. J. Higgins' (State Agricultural Chemist) Report for 1852, page 36 to 41 inclusive. JOSEPH BROWN, Sec'y.

BALTIMORE, Sept. 14, 1852. Oct 1-1yr.

# STRAW CUTTERS

*CYLINDRICAL IMPROVED,*

## Or Patent Screw Propellers.

The improvement is principally on the feeding works causing more rapid performance—reduction of labor, and by this new mode of construction the works are rendered more simple, consequently more durable.

SIZES AND PRICES.

| | | | | |
|---|---|---|---|---|
| Width of Cut, | 9 | 11 | 13 | 15 Inches. |
| Price, | 28 | 30 | 40 | 45 Dolls. |

Sinclair & Co's. Patent CORN AND COB CRUSHER, and Grinding Machine—price $30 and 31.50. Improved Single and Double Spout CORN SHELLERS, $10 and $16

Virginia CYLINDRICAL CORN SHELLERS, . . . . 30

VERTICAL VEGETABLE CUTTERS, Improved, . . . 15

CHAIN PUMPS, with plain Stands and Ornamental Covers. THERMOMETER CHURNS, the most approved. Prices variable. AGRICULTURAL FURNACES AND BOILERS.—Sizes preferred, 33, 60 and 90 gals. Prices, 25, 37, and $49.

*PLANTATION CORN MILLS, of various sizes.*

The 30 inch Cologne and French Burr preferred and recommended. Price, $110 and $135.

THRASHING MACHINES, at 35 40, 50 and $60.

STRAW CARRIERS, and Bittings and Wrenches for do

## SWEEP HORSE POWERS,

Made on the most approved SPUR and BEVEL geared principle. Price $100 and $135.

FANNING MILLS, with late improvements, 25, 30 a $35

## PLOWS, HARROWS, &c.

For Maryland and Virginia River lands, and for the South generally. The PATUXENT PLOW rates first in value. The S. & M. or Improved DAVIS PLOW, is excellent, and can scarcely be excelled. Price 4, 4½, 5 and $6. For heavy, clay and rough lands, the Maryland Self-sharpening and Improved Barshears are preferred. Price for 2 and 3 horse sizes, 12 and $15.

NO. 8, MARYLAND SELF-SHARPENING

Is a star Plow, and for those who wish a heavy two, or light three horse Plow—none better can be obtained. Price $12.

## SUBSOIL PLOWS,

Of various sizes. Prices, 6, 8½ and $12½.

For seeding, or light flushing or cultivation, the ECHELON OR GANG PLOWS, cutting two or three furrows, are particularly valuable—especially those with high standards, and rear brace. Price 5½ and 6½.

## HARROWS.

The Maryland Hinge Expanding, and the Geddes Harrow, are the most approved. Price 7.50 to $10.

## ROLLERS.

Serrated, Clod, Cast Iron and Segment Rollers, at 35 and $75.

WHEAT DRILLS, $90—Corn Drills, $21.50. Garden Seed Drills.

Also for sale, PLOWS AND CASTINGS, of various patterns and sizes. CULTIVATORS, assorted, for Corn, Tobacco, and Cotton; Rolling Screens, for preparing wheat for seed. STRAW CUTTERS,—Raw Hyde, Virginia, Dutch, and Negroe's Own, at 5 and $16. Iron Mills, Post-hole Augers, REAPING AND MOWING MACHINES, Ox Yokes, Bush and Root Pullers, Brier Hooks, Manure Drags, Manure Forks, Horse Scoops, Ditching Tools, Sausage Cutters and Fillers, Apple Pearers, Grindstones,

## GARDEN TOOLS.

A LARGE AND GENERAL ASSORTMENT OF

## FIELD AND LAWN GRASS SEEDS.

☞Orders for FRUIT AND ORNAMENTAL TREES, for Clairmount Nursery, will receive attention on and after the first of next November.

## R. Sinclair, Jr. & Co.

58 *Light Street, Baltimore.*

# TO FARMERS & PLANTERS.

Gentlemen: In consequence of the great advance in the prices in Iron, and other materials, we find it necessary in order to receive a remunerative profit, to make a slight advance on the prices of our Wrought Iron Railway Horsepowers, and Iron Cylinder Thrashers; and during the year 1854, and until further notice, the prices will be as follows, viz:

| | | |
|---|---|---|
| Best Wrought Iron double Railway Power, | | $115,00 |
| " 24 in. Iron Cylinder Thrasher, including wrenches, | | 60,00 |
| Straw Carrier, | | 15,00 |
| Band, | | 10,00 |
| | | $200,00 |
| Best Wrought Iron Single Railway Power, | 87,50 | |
| " 20 in Iron Clyinder Thrasher, and wrench, | 55,00 | |
| Band, | 7,50 | $150,00 |

5 per cent will be deducted if paid on delivery.

It has been too often the course of manufacturers in contingencies like the present, to substitute inferior materials and workmanship, but our aim having been to excel in these points, we are now even using better materials, and our work is being put up in a more substantial manner than in any previous season. We have deemed this the better course to pursue, rather than to deteriorate in either material or workmanship—and trust that the propriety and justice of our course, will prove satisfactory to our customers, and secure to us their continued patronage. Respectfully,

E. WHITMAN & CO.

Baltimore, Feb. 24, 1854.

## The Latest Improvement in Reapers.

# BURRALL'S REAPER,

RECEIVED THE FIRST PRIZE, ($50,) at the Trial of Reapers in the *harvest field*, at Geneva, by the Judges appointed by the N. York State Agricultural Society. Nine Reapers were entered, and each required to cut about *three acres of wheat, and two of Barley*, much lodged and tangled, the straw soft and tough, on rough and uneven ground. Every facility was afforded for a *full and impartial trial* and examination as to draft, construction and performance, and the FIRST PRIZE was unanimously awarded to THOMAS D. BURRALL, for the BEST GRAIN REAPER. The Judges in their report, say: "T. D. Burrall's Machine *performed its work in the most admirable manner*; the *gavels were well laid*; the *workmanship* and *materials* were excellent; the *circular apron* for side delivery, the *balance wheel*, and an arrangement to ELEVATE the exterior edge of the apron, are valuable features." It has no extra *wheels* or pinions beyond what are simply necessary; *no reel* to beat down or waste the grain; *no band wheels, pullies, belts, straps, or harness of any kind*, to get out of order; nothing to hinder the cutting and securing the grain. *Simplicity, Strength and Reliability for doing the work all day and every day*, have been the leading objects.

2. It cuts Grain of all kinds, in all conditions, without clogging, and may be worked by *oxen* or horses.

2. It cuts at any height required by few moments' change.

3. It discharges the grain *in the rear* or *at the side*, leaving room for the team and machine to pass again without treading on the Grain. This change is made by means of an extra apron, (attached in a moment,) from which the grain is laid *in a better condition for drying and binding*, and with much less labor to the raker than has ever been done before.

4. It has a *Balance Wheel*, which corrects the irregularity of the crank motion, and gives a quiet and uniform movement to the machine.

## FARMERS AND PLANTERS.

GENTLEMEN:—

Having witnessed the trial at Geneva spoken of above, and carefully examined the various kinds of Reapers in this country, we have become satisfied that BURRALL'S Reaper possesses many important advantages over all others, and is decidedly the best for Southern use; they are simple, durable, of easy draft, easily put together and managed, all of which is very important to the farmer, and in order to bring them into general use at the South, we have made arrangements for the manufacture of them, at our Factory in Baltimore, on an extensive scale, and shall spare no pains to get them up in the most substantial manner.

Those in want of the best Machine, manufactured of good materials, in a superior manner, will please forward their orders early.

E. WHITMAN & Co., Baltimore, Md.

*Cash Prices.*

| | | |
|---|---|---|
| No. 2 Reaper, | 4½ foot cut, | $120 |
| No. 4 | 5½ foot cut, | $130 |

A deduction of $5 will be made if the side delivery is not furnished, and $20 will be added to the above price if forward wheels are furnished.

Drafts, or Notes, with interest added, and made payable at any Bank in this State or Virginia, will be received in payment, if the parties are known to be responsible.

E. WHITMAN & CO., Baltimore, Md.

Baltimore, January, 1854.

**100** CORN PLANTERS—The best article in use. Price, $20. For sale by
E. WHITMAN & CO.

**10.000** PLOUGHS, HARROWS & CULTIVATORS—at prices as low as can be had in the United States, and of superior quality. For Sale by
E. WHITMAN & CO.

## THRASHING MACHINES.

THE Largest Stock ever offered in this country, and constructed in the most substantial manner—at prices ranging from $125 to $350.
E. WHITMAN & CO.

## Grant's Fan Mills and Grain Cradles,

At his Lowest Wholesale Prices. For sale by
E. WHITMAN & CO.

## To Southern Planters, Merchants & others.

REMEMBER, we have the largest and best assorted stock of *AGRICULTURAL IMPLEMENTS* and Machinery in the city—increasing our business. The present stock has been manufactured expressly for our spring sales. ☞Horse Powers and Threshers, of the most improved patterns, for sale on more reasonable terms than any house in the city.

☞GUANO AGENCY.—The undersigned attends to the purchasing and forwarding of Guano at moderate rates.

F. B. DIDIER & BRO.
mh 1 No. 97 North Paca street, Baltimore.

## To Farmers and Traders.

THE subscribers, grateful for the very liberal patronage of their country friends, beg leave again to claim a full share of their future patronage and custom. They are prepared with the very best materials, and are determined to spare no pains to give entire satisfaction, as regards price and quality, in the manufacture of Ploughs, Harrows, Cultivators, Wheat Fans, Straw Cutters, Corn Shellers, Corn and Cob Crushers, Horse Powers and Threshing Machines, Reapers and Mowers, Wheat and Seed Drills, and Machinery of every description and pattern approved by farmers. Also, CASTINGS, by the ton or smaller quantities, with a liberal discount for cash.

☞Country Merchants and Southern buyers are requested to give us a call before going East.

COTTINGHAM & JOHNSON,
mh 1-6t 150 Pratt St. Wharf, cor. Hollingsworth St. Balt.

COTTINGHAM & JOHNSON, Manufacturers and dealers in AGRICULTURAL IMPLEMENTS, of all kinds, are again the appointed Agents of C. H. McCormick, for the sale of his REAPERS and REAPERS and MOWERS combined. ☞These machines have been again improved and strengthened. They can now be recommended to the farmer as the very best machine of the kind. ☞Please send orders early, to secure Machines.

COTTINGHAM & JOHNSON,
mh1-tf 150 Pratt St. Wharf, cor. Hollingsworth St.

## HUSSEY'S REAPER AND MOWER.

THE farmers of the Southern and Middle States have been my principal customers. To get a good Reaping Machine has been their main object, but at the same time it has been very desirable with many of them that the same machine should cut their grass also without the necessity of incurring the expense of another machine for that purpose. With this view I have for several years constructed many of my Reapers in such a manner, that by a slight alteration they became Mowing Machines. Although it has been well understood by farmers that such machines could not be as good mowing machines as when made expressly for grass, yet they were generally satisfied with the defect, in consideration of its being a good Reaper—My manufacture has been hetherto confined to such machines. I am now called upon for machines exclusively for mowing, and am now for the first time making extensive preparations for a large supply of MOWING MACHINES, as well as *Reapers* for the ensuing season.

These machines will be warranted superior to any thing of the kind yet made. Those who wish machines exclusively for mowing may rely on having my latest improvements; the result of my recent experience both in this country and in Europe—great pains is taken, and at a greatly increased expense to procure iron from the most celebrated iron works in the country.

The First Prize was awarded to my Reaper at the Bath and West of England Society, held at Plymouth, in June, 1853, over the other American Reaper; and at the meeting of the Royal North Lincashire Agricultural Society, held at Blackburn, August 26th, 1853, the Medal was awarded to my Mowing Machine, over an American Mowing machine, for which extraordinary claims have been made for superiority.

Those who wish the Mower and Reaper combined can be supplied as usual. OBED HUSSEY. feb. 1-1

1 have seen a printed circular lately issued in this city, in which it is stated, that the Reaper, which I sent to the trial at Curl's Neck, in June last, was made "*expressly for the occasion.*" This is not correct. The machine made for that was sent to Nottoway County, where it was supposed the trial was to take place. In consequence of the change of place of trial, I had only time to send such a machine as I endeavor to send to all my customers, and of course a good one. The object of the circular seems to be, to show that the high stand my Reaper obtained at the trial at Curl's Neck, was entirely owing to its having been made "*expressly for the occasion,*" and that one of my ordinary make would have failed. Those who avail themselves of my original invention, should endeavor to enjoy its benefits modestly, and without an attempt to injure me.

mh 1 O. H.

## Poudrette and Bone Black.

POUDRETTE in bulk and in barrels, $1.50 per barrel.
Pulverized Bone Black, " " 1¼ cts. per lb.
Pulverized Bituminous Coal, $1.25 to $2 per barrel.
For sale by WM. CHILD,
mh 1-1t* 78 South street, Bowly's Wharf.

MEXICAN GUANO for sale in lots to suit purchasers, by STIRLING & AHRENS,
mh 1-tf 54 Buchanan's Wharf, 1 door below Pratt St.

NOTICE TO FARMERS AND PLANTERS—DUNLAP & Co., *FORWARDING, SHIPPING* and *COMMISSION MERCHANTS*, Locust Point, Baltimore, Md., will attend promptly to orders for receiving and forwarding GUANO. mh 1-3t DUNLAP & CO.

## Kentish's Prepared or Artificial Guano.

*Twenty Dollars per Ton.*

POTATO ROT.—I have used "Kentish's Prepared Guano" this season on potatoes. My crop was large and all sound. Where I did not use it, the potatoes were all rotten and worthless. My neighbors, also who have not used the Fertilizer, have not raised a saleable potatoe this year. I consider it a preventive of Rot. G. PREAUT.

Westchester co., N. Y. Sept. 29, 1850.

### Extract of a Letter from E. B. Addison,

Alexandria co., Va., April 23, 1851.

Dr. John H. Bayne, President of Prince George's Co. Agricultural Society, of Maryland, has desired me to inform you that last spring he used African Guano, Poudrette, Peruvian Guano, and your Prepared Guano on Potatoes. The first two were distanced, but the result from the Peruvian and yours, were about equal. He pronounces your prepared Guano to be a very excellent article, and esteems it highly.

It is equally Fertilizing, applied to every crop. See the innumerable certificates in proof of this, in the printed circular, to be obtained at Kentish & Co's. Depot, No. 159 West St. New York. mh 1-3t

## SUPER PHOSPHATE OF LIME.

THE EAGLE CHEMICAL WORKS, of New York, through their agents, R. R. GRIFFITH & SON, No. 24 Spear's Wharf, Baltimore, offer for Sale this invaluable manure, as a top dressing. It is strongly recommended, the season being now at hand.

The Super Phosphate, has been tried on every variety of roots, and garden crops, with invariable success, and at the advanced price of Peruvian Guano, is now conceded to be the cheapest, and most valuable manure sold. Price $45 per ton of 2000 lbs. or 2,25 per 100 lbs. mh 1-1tf

## Guano! Guano!!

THE subscribers have now in store their supplies of Guano for spring application, and will be pleased to forward the following varieties in quantities to suit:

PERUVIAN GUANO of the first quality, imported by the Government, and sold by us at a very trifling advance on their rates.

AFRICAN GUANO, just imported direct, in the Barque "Martha." This article is very dry, rich in Ammonia and Phosphates, and handsomely put up in white cotton bags,

MEXICAN GUANO, imported in the Barque Hayard, well secured in good barrels—very rich in Phosphates, and therefore well adapted for mixing with Peruvian.

They guarantee the purity of all Guano passing through their hands, and as they are the oldest house engaged in the trade, possess every facility for furnishing this article at the lowest possible rate. W. WHITELOCK & CO.
mh 1-2t Corner Gay and High Streets, Baltimore.

FOR SALE—Four Devon Bulls, 2 years 4 years, 6 mos. and 9 mos. old; of very superior stock. Apply at this office.
mh 1-1t


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